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QUARTERLY REPORT

of

UNIVERSITY OF NEBRASKA -
INTERNATIONAL COOPERATION ADMINISTRATION

OMNIBUS CONTRACT

TURKISH PROGRAM

Period Ending September 30, 1957

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A.I.D.
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SUMMARY

Accomplishments in both Ankara and Ataturk phases of the program have been very encouraging during this period.

Ankara University

This part of the program has continued to absorb the major portion of the field personnel activities but a definite trend toward more emphasis on a new University seems evident. Some personnel who finished their assignments with Ankara University have not been replaced.

Participants from Ankara University are decreasing in number with some coming for shorter periods.

Problems of securing participants with adequate command of the English language are paramount.

Present plans indicate a tapering off on the Ankara phase of the program both in technical assistance to Turkey and in participant training in the U. S. Special help in the fields of Home Economics and Extension and Information would seem justified over an extended period.

Ataturk University

Passage of the New University enabling act or charter in June 1957 marked a high point in this phase of the program during this period. (See copy of Ataturk law in report.)

Following passage of this law there was a ground breaking ceremony and at least three buildings were started very soon.

Thirteen participants are now studying in the U. S. for assignment to Ataturk staff.

The goal of opening the New University on October 1, 1958 still seems to stand.

Positive action in some area has greatly strengthened the probability of successful conclusion of this project.

PERSONNEL

Field Staff

The following changes occurred in the professional staff in Turkey during this period:

Dr. Marvel L. Baker, Chief of Staff and Dean of our group in Turkey, completed his two-year assignment and decided to return to Lincoln. He was replaced by Dr. Otto G. Hoiberg, a sociologist formerly connected with the Extension Division of the University of Nebraska. Dr. Baker remained in Turkey for about three months following completion of his two-year period in order to assist Dr. Hoiberg in becoming acquainted with the duties and details of his new job. Since Dr. Hoiberg did not arrive in Turkey until July 1, this arrangement helped to smooth over the operations due to change.

Mr. Stanley C. Smith, Architect, completed his tour of duty in May and was replaced by Prof. Paul Weigel of Kansas State University.

Prof. J. Orvis Keller, Engineer, also completed his two years in June and Prof. Weigel was assigned to handle such engineering responsibilities as possible along with his work as an architect for the New Ataturk University.

Dr. Albin Anderson, Arts and Science Specialist, finished his two years of work on June 1 and returned to Nebraska. He was replaced by Dr. Carl J. Schneider, formerly an Associate Professor in the Department of Political Science, University of Nebraska.

Dr. Homer T. Goodding, Agronomist at Ankara University, returned to the States after July 1 when he completed his assignment. No additional agronomy assistance is contemplated in the immediate future.

On July 1, 1957, Dr. B. T. Simms was sent to Turkey as a Veterinary Specialist at the University of Ankara. Simms was formerly Chief of the Bureau of Animal Industry in the U.S.D.A. and is in a position to render extraordinary valuable assistance to the Veterinary Faculty in Ankara University.

PARTICIPANT TRAINING

Forty-nine participants had arrived for training under the University of Nebraska Contract Program prior to April 1, 1957. During the period April 1 to September 30, 1957, 18 additional participants arrived making a total of 67. Of this number thirteen are being trained for assignment to the new Ataturk University. Thirty six have returned to their former positions at the University of Ankara.

Evaluation

Evaluation of participant training continues to be one of the more difficult problems. It seems quite evident that the best measurement can be made after the participant returns to Turkey and demonstrates through application. This, however, is naturally a slow method. Every effort is being made to secure a realistic measure of each individual's progress through reports from both the individual and his advisor, primarily with the objective of improving the training procedures for new arrivals.

Language continues to be the greatest problem and during the summer months a special English course for all participants covering 8 hours of training each week was instituted. The beneficial results of this course have led to a continuation during the present school year.

Orientation of Participants

All participants are brought directly to Lincoln after arrival in New York, regardless of where they are to take their major training. Here they are given orientation insofar as possible concerning procedures and methods of training, what to expect in living and related experiences in this country. Programs are reviewed and adapted to meet their objectives. Language barriers often make this orientation very difficult at first and it seems desirable to repeat or make orientation a continuous process.

Programming Participants

Proposals for more adequate programming before participants leave Turkey are now generally agreed upon and it is felt that such prior planning will greatly improve the effectiveness of such training.

18 Turkish Participants arrived during period April 1 - September 30, 1957

<u>Participant</u>	<u>Field of Interest</u>	<u>Date of Arrival in U.S.</u>	<u>University of Nebr. Advisor</u>	<u>Scheduled Period of Training</u>
Alibasoglu, Mehmet	Veterinary-Brucellosis	Aug. 18, 1957	Young	One year
*Aydin, Mehmet	Physics	May 31, 1957	Chasson	Two years
Bese, Muzaffer	Veterinary	August 18, 1957	Young	One year
*Ergene, Abdusselam	Soils Science	Sept. 5, 1957	Rhoades	1½ years
Goksu, Kamil	Veterinary	Aug. 18, 1957	Young	One year
Kansu, Sedat	Ani. Nutr. and Land Grant Colleges	July 13, 1957	Goodding	3 months
Kurt, Ahmet	Dairy Prod. & Bac.	May 31, 1957	Kelly	Two years
*Ozbek, Haki Halil	Mathematics	May 31, 1957	Leavitt	Two years
Ozbek, Nurinnisa	Soils Science	Aug. 22, 1957	Hanway	One year
Ozbek, Sabahattin	Horticulture	Aug. 22, 1957	Miller	One year
Ozcan, Halil	Edu.-Ani. Hus.	Aug. 18, 1957	Loeffel	One year
*Ozhan, Macit	Ani. Science	May 31, 1957	Baker	Two years
Saglam, Mahmut	Veterinary	Aug. 18, 1957	Young	One year
*Sozmen, Mehmet	Chemistry	Aug. 22, 1957	Washburn	1½ years
Tariman, Celal	Ind. Crops Prod. Land Grant Colleges	Sept. 9, 1957	Hanway Williams	3 months
Tekin, Cavit M.	Def. Dis. - Ani. Nutrition	Aug. 18, 1957	Loeffel	One year
*Ucarci, Ferit	Ani. Science	Sept. 17, 1957	Baker	Two years
*Yalvac, Suavi	Zoology	Sept. 5, 1957	Manter	1½ years

*Training for assignment to positions at the New Ataturk University.

Ten Turkish Participants Departed During Period April 1 - September 30, 1957.
(All returned to positions at the University of Ankara)

	<u>Date of Departure</u>
Arda, Mustafa	August 23, 1957
Eker, Macit	July 13, 1957
Ersoy, Ethem	September 5, 1957
Kisakurek, Hakki	July 13, 1957
Konuk, Talat	September 20, 1957
Omurtag, Cemal	September 27, 1957
Ozcan, Cahit	September 5, 1957
Ozkazanc, Nazim	September 5, 1957
Tosun, Osman	July 13, 1957
Urman, Huseyin	Aug. 23, 1957

Thirteen Turkish Participants here who arrived before April 1, 1957 and
who were still here September 30, 1957

- *Aksoz, Ibrahim
- *Alkan, Ziya
- *Baykan, Omer
- *Cataltas, Ihsan
- Erkut, Ayse
- Hizalan, Eyub
- Kundak, Suat
- Ozguden, Turgut
- *Tosun, Fahrettin
- Sahinkaya, Rezan
- *Aras, Ali
- Cagatay, Mecid
- Gogus, Kemal

*Training for assignment to positions at New Ataturk University.

FOREWARD

This report covers the period during which a number of field staff members completed their original two-year assignments in Turkey. In general the work of these persons covered considerable exploration into the possible ways of most effectively working with the University of Ankara, and preliminary planning for the new Ataturk University. The patterns of operation developed during this period in the two phases of the program will no doubt be followed in connection with most of the future developments under the program.

Since the present contract between the University of Nebraska and ICA-Washington terminates on May 31, 1958, it becomes imperative that the work carried on so far be carefully evaluated and the future needs estimated so that possible projection of the program beyond the termination date may receive careful consideration.

Those who have completed their assignments are presenting in this report brief summaries of their experiences and recommendations for future activities.

Report
by
Dr. A. C. Breckenridge
Dean of Faculties - University of Nebraska

This covers a visit to Turkey as a reviewing officer from August 5 to 12, 1957.

Staff Morale. The morale of the staff seemed exceptionally good notwithstanding the difficulties of arriving without air express items arriving concurrently. Similarly the inconvenience of delay in arrival of automobiles poses a hardship, but the spirit of cooperation by those already settled with the newcomers was most gratifying to observe.

Relation with Turks. Although language difficulties continue to pose a problem in harmonious relations it appears that our staff and their Turkish counterparts are working together very well. We are in the position of trying to demonstrate and encourage a different look at educational objectives and it puts our staff in a difficult position, one which must be guarded to avoid presuming that we have all the answers. A most difficult problem also is translating the goals for Ataturk University as we see them and to convince the Turks of the desirability of those goals. This will require a long time in being consummated. We must be patient if persistent.

Progress with Programs. (Ankara) For the most part it would appear that the objectives of our program in connection with Ankara are going along fairly well. There is every evidence that the greatest progress will be made with the younger staff than with the more senior staff, although some of the latter are slowly but surely recognizing some of the objectives our staff are pursuing. It is true our advice is not always being followed

but not because they don't believe it but merely because they feel the objectives can not be met at this time. Some don't accept our objectives, I am sure.

(Ataturk) The problems with Ataturk University will now become increasingly acute. Now that the construction of physical plant is under way the chief problems will be to realize the appointment of the Rektor and the deans of the colleges. If this is not done quickly there will be no chance of getting the University under way in the fall of 1958. Equally disturbing is the slow pace at which the Ministry seems able to find a way of settling not only the problem of those appointments but also through the Ataturk committee a way of singling out those staff members who will find going to Erzurum a challenge. The answer is not despair but rather continually pointing out the fast approaching date by which the decisions must be made.

There seems to be some opinion that many of the staff at the University of Ankara who wish to come to the United States for a period of time are not wholly sold on the venture as one which will be of professional benefit but rather are considering it as a sojourn primarily for personal benefit and pleasure. Some of the groups slated to arrive are wasting their time and ours since they have not concentrated very well on English. They can learn English as is evidenced by such people as Dr. Tariman, who carries on very well.

Recommendations. Three problems require immediate attention.

(1) What should our policy be with Ege University and any other similar arrangement that might be requested in the future by the Minister of Education or of Agriculture?

(2) What should our policy be regarding appointments from our staff to join, however short the time, the staff of Ataturk University? In connection with this, also, is the question of assignments as chairmen of departments or on a co-chairman basis.

(3) Should the term of our contract with ICA for these projects be extended for a period of not less than to June 30, 1961?

There is one lesser item which should be handled on the spot there with ICA. The office for the central staff on Ataturk Boulevard is quite sub-standard. It needs different furniture, a paint job, and new shades. This would not require a great expenditure of money and would give our group a feeling of a little pride in the working conditions they have.

One final observation. The total U.S. foreign aid programs involve more than policy between the University of Nebraska and our staff in Turkey. They involve the whole administrative arrangement for the carrying on of these foreign technical programs. The administrative arrangement has not improved in the eight years since the foreign aid programs got under way. There are too many layers of administrative organizations required to pass on problems before anything can be accomplished. The delays we face in getting answers to the most simple problems should not be tolerated much longer.

Report
by

Otto G. Hoiberg, Chief Advisor
Nebraska Staff in Turkey

A. PERSONNEL:

1. Incoming personnel were as follows:

July 3: Dr. and Mrs. Carl J. Schneider and sons Carl and John

July 4: Dr. and Mrs. B. T. Simms

There were no departures during the three-month period.

2. A regular weekly staff meeting has been instituted for all members of the Nebraska Group, including secretaries. It is held each Friday afternoon in the Nebraska Office on the Agricultural/Veterinary campus of Ankara University, beginning at 3:45 with coffee, tea, cookies and continuing with a discussion of common problems until adjournment at 5:00 p.m. These weekly get-togethers are proving particularly helpful in the following respects:

- a. They provide an opportunity for a free discussion of administrative problems relating to transportation, secretarial arrangements, reports, procedures concerning purchase of equipment under the Nebraska Program, etc.
- b. They serve as a means of keeping all staff members informed concerning the major activities and problems of their colleagues. As an example, a recent session was devoted to a discussion of the architectural and personnel problems relating to the Ataturk University project, with Professor Weigel and Dr. Schneider leading the discussion.
- c. They give all staff members a chance to rub elbows socially at least once each week.

3. Dr. Fred McKenzie made a one-month trip to Canada and the United States at the suggestion of the Faculty of Veterinary Science, Ankara University, and with the strong concurrence of the Ministry of Agriculture. The purpose of this trip was to obtain certain specialized information desired by Turkish authorities in connection with the program of artificial insemination which they are trying to develop.

4. The morale of the group is excellent. Very helpful in this regard was the visit of Dean A. C. Breckenridge in August. An effort was made to bring Breckenridge into personal contact not only with the appropriate Turkish and ICA officials, but also with all Nebraska Group members in their offices, in the field, and in their respective homes. The importance of periodic visits of this nature cannot be over-

estimated, whether one evaluates them from the professional standpoint or in relation to their effect upon group spirit. We considered the Breckenridge visit eminently worth while.

5. The members of the Nebraska Group remain very active in the work of our Ankara church, school, and community, holding many positions of importance. An Air Force colonel recently asked me, "Are all of the people back in Nebraska of the type that you have here in Ankara?"

B. ATATURK UNIVERSITY PROGRAM

1. Ataturk University Development Committee - With the departure of Dean Marvel L. Baker from Ankara, the Nebraska element of the Ataturk University Development Committee was left without a specialist in Agriculture. To remedy this situation, Dr. Fred McKenzie and Dr. W. W. Ray have been added and are now in regular attendance at all A.U.D.C. meetings. The other Nebraskans involved are Schneider, Weigel and Hoiberg.

Meetings of the A.U.D.C. have been held with reasonable regularity every week or ten days, with additional sessions of ad hoc sub-committees from time to time. Although the entire Nebraska element is new to the Committee, substantial progress has been made in establishing rapport with the Turkish members. Major attention during this Quarter was given to problems relating to personnel, equipment, and architectural plans for Ataturk University. (See paragraphs 2, 3, and 4 below.)

While the A.U.D.C. is still serving a useful purpose, its limitations are becoming increasingly clear. With the opening date of Ataturk University only one year away, the immediate appointment of its key administrative officers is imperative. The present Committee is powerless to deal with a wide variety of problems that should already by this time have received the careful attention of a Rektor and Deans. Despite repeated and varied efforts to encourage action by the Minister of Education in this regard, nothing has been done. At the time of Dean Breckenridge's visit in early August, we were assured personally by the Undersecretary of Education that the appointment would in all probability be made within the ensuing two weeks. The latest word in that this important matter will be expedited as soon as the October 27 national election is over.

2. Physical Plant - The first four buildings scheduled for construction at Erzurum are the Chemistry building, the Social Sciences building, the student dormitories, and the faculty housing unit. Two contracts were let on July 4, 1957. One was for the Chemistry building, to be completed and ready for occupancy by October 1, 1958. The other was for the Social Sciences structure, to be completed about one year later, by August 30, 1959. The Ministry of Public Works plans to let additional contracts at an early date for the student dormitory building (with a completion date of October 1, 1958) and for the faculty apartment building (to be completed by August 30, 1959).

In the case of the two contracts let on July 4 (Chemistry and Social Sciences buildings), the bids were made on the basis of preliminary plans only. This procedure was followed in order that the necessary surveys, the excavation work, and the assembling of material and construction machinery might be completed during the summer of 1957. These preparations are now underway at Erzurum, while in Ankara and Istanbul (where the architects have their office) the detailed architectural plans are moving slowly toward completion and final approval, so that actual construction of the first buildings can be started in the spring of 1958. A 24-hour-per day construction schedule is planned, beginning at that time, and it is anticipated by the Ministry of Public Works that the Chemistry building and the student dormitory building will be ready for use by October 1, 1958, as scheduled. Professor Weigel is giving much time and effort to problems relating to the development of final architectural plans, and he intends to make a personal inspection visit to the Ataturk University site sometime this fall. Also, he now makes periodic visits to the Ministry of Public Works in Ankara to secure firsthand and up-to-date information regarding progress on the construction front. During the summer months we endeavored to secure such information through the Turkish members of A.U.D.C. but this proved to be an unsatisfactory approach. The A.U.D.C. has given its formal approval to our present direct approach to the Ministry of Public Works, and we now know what is going on.

The cornerstone for Ataturk University was laid at Erzurum on July 23, 1957. Since this occasion has already been described in an earlier report to the University of Nebraska Turkish Committee, it will be merely mentioned here.

3. Participant Training Program - Since July 1, 1957, the following Participants have been sent to the United States under the Ataturk University phase of the Nebraska Program:

<u>Name</u>	<u>Field</u>	<u>Duration</u>
Abdusselam Ergene	Soils	2.0 years
Burhan Pekin	Chemistry	1.5 years
Mehmet Sozmen	Chemistry	2.0 years
Ferit Ucarci	Animal Husbandry	2.0 years
Suavi Yalvac	Zoology	1.5 years

In all instances the processing of these Participants was initiated prior to Dr. Baker's departure from Ankara. Our function during this Quarter has been to complete their processing and to send them abroad. So far as we can determine, this exhausts the supply of hold-overs from the Baker administration.

A wave of new Ataturk Participants will eventually be forthcoming under the Nebraska Program, a publicity campaign recently having been completed to attract applicants for positions at the new University. Screening by the Ataturk University Development Committee will soon begin. In due time a list of the most promising candidates will be then sent to the Minister of Education for further scrutiny, after which a Minister's List will be issued from which Participants can be drawn.

According to the provisions of Work Program No. 2, the target for the current fiscal year is to send fifty (50) participants (60.5 man-years) to the United States for training.

A major problem seems to be shaping up in relation to the staffing of Ataturk University. Although a final analysis of applicants has not yet been completed, it appears certain that the vast majority are young men of low academic rank. A very few have reached the Docent level, it is informally reported, and no one has yet applied who holds the rank of professor. While the basic law for Ataturk University is relatively lenient in regard to academic rank as a requirement for teaching, the danger that the University will be short of qualified teachers on the opening date is very real indeed. The Ministry of Education is fully aware of this, and has developed the following strategy to cope with the situation:

- a. As many staff members as possible will be selected from the list of persons who have voluntarily applied for positions at Ataturk University.
- b. In order to fill the positions still vacant after all possible appointments have been made from the group of voluntary applicants, the Minister of Education will next draw upon the Docents and Professors at other universities in Turkey to the extent that seems possible, necessary, and desirable. Such men will be asked by the Minister to go to Ataturk either on a temporary or a permanent basis.
- c. As a last resort, the Minister will turn to foreign countries for men to complete the Ataturk University staff. To the extent that this becomes necessary, it would appear crucial that men who have an understanding of the land-grant educational concept be selected. Such men are presumably available only in the United States. It is my belief that several strong American professors of land-grant background will be needed on the staff of Ataturk University during its first few years of operation. If this proves to be the case, the Turkish members of the A.U.D.C. have been advised that early action is imperative. The Public Administration and Education Division of ICA has given clear evidence that it is prepared to implement a program of logistic support for any Americans who may join the Ataturk staff.

A further comment should be made in regard to the Participant program for Ataturk University. The Ministry of Education has developed a program (parallel to ours) under which presumably 30 to 40 additional future staff members for Ataturk University will be sent abroad for study. We have hitherto been unable to obtain any specific information regarding this Ministry program. We do know, however, that it is having difficulty in getting off the ground, possibly because of kadro problems, foreign exchange difficulties, etc. In any event, the Turkish members of A.U.D.C. recently asked if it would be possible to

transfer to the Nebraska Program a number of men who were ready to go to the United States under the Ministry Program but who were prevented from going because of the temporary stalemate referred to above. After a careful consideration of possible implications, we stated that we did not consider it appropriate to send such men automatically to the United States under the Nebraska Program. We added, however, that we would be glad to have them placed into the A.U.D.C. hopper, to be evaluated at the same time as, and on an equal basis with, all applicants who are to be considered under the Nebraska Program. The "Ministry men" would receive no priority of any kind, and would be sent to the U.S.A. under our program only if the A.U.D.C. should consider them the strongest candidates.

One haunting problem, to which there appears to be no solution, is that most of the participants who will be sent to the United States for training will be out of Turkey at the time Ataturk University is to open its doors. A related problem exists in regard to the Rektor and other top administrative officers who presumably should go to the United States for six-month periods, before the fall of 1958. How these men can leave during the crucial 12-month period which lies ahead is difficult to see. Perhaps they could go later, one by one.

4. Equipment - Several months ago a total of \$154,000.00 in U.S. funds was set aside for the purchase (by Turkish authorities) of equipment for Ataturk University. Tentative lists of needed equipment had been developed in this connection last spring (or earlier) by Nebraska members of the A.U.D.C. During the months of July and August, 1957, Dr. Schneider assumed responsibility for revising these lists and developing them into final form. The list of needed Chemistry equipment which had been obtained months ago from Pennsylvania State University, for example, was re-worked carefully by Dr. W. W. Ray in cooperation with a Turkish Professor of Chemistry and Dr. Schneider in order to bring it into conformity with the actual instructional situation which will exist at Ataturk University.

The revised equipment lists were submitted to the P.A. & E. Division of ICA in early September, 1957, and comprised the following categories, with complete supporting details concerning the items included in each category:

<u>Subject Area</u>	<u>Estimated Cost</u>
Audio Visual	\$ 7,500.00
Botany	15,000.00
Chemistry	19,000.00
Civil & Arch. Engineering	21,000.00
Library (Equipment, Books, Maps, Publications)	22,000.00
Plant Science	12,000.00
Miscellaneous (Duplicating, etc.)	9,000.00
Total	<u>\$105,500.00</u>

This total of \$105,500.00 falls \$48,500.00 short of the \$154,000.00 which has been set aside for Ataturk equipment purposes. The reason for this lies in the fact that we have temporarily eliminated all equipment for farm shops (originally included by Dr. Baker's staff) from the list because it now seems certain that there will be no building on the Ataturk campus in which such equipment can be installed during the first year or two. We, therefore, decided to hold back the sum in question until such time as a Dean of the Faculty of Agriculture has been appointed. In consultation with him, we can then decide whether or not this amount shall be earmarked for shop machinery (to be stored somewhere until it can be used) or assigned to some other type of equipment. In any event, a supplementary list of some kind will be submitted this fall to the P.A. & E. Division, bringing the total up to \$154,000.00.

The arrangement, as I understand it, is that ICA/Washington will open a dollar-account in a New York bank upon which the Turkish Ministry of Education can draw for the purchase of equipment up to the amounts authorized in the various categories submitted by ICA/Ankara upon our recommendation.

5. The Fundamental Problem - As we of the Nebraska Group have worked from week to week in collaboration with our Turkish colleagues on problems such as those described above, our concern about the fundamentals of the situation has deepened. A growing acquaintance with the basic nature of the Turkish system of higher education has not served to generate any high degree of assurance in us that Ataturk University will, in reality, become the type of institution that it is supposed to be. The real danger, as I see it, lies not in the possibility that we may perform inadequately in relation to the knotty problems of equipment, Participant training, physical plant, curriculum planning, and the like. It lies rather in the fact that certain prime essentials of a "land grant college" seem to have little or no place in the university traditions of Turkey. To what extent even the Turkish members of the A.U.D.C. sense this problem, is not clear to us at this time.

If Ataturk University is to become a distinctive institution, based on the educational philosophy of our land-grant college, it must have three well integrated elements: classroom instruction, a program of research geared to the practical needs of the people of Eastern Turkey, and an extension program of some kind or other. At the present time, the entire extension program of Turkey is centered in the Ministry of Agriculture, and the same is to a large extent true of agricultural research. In Ataturk University, however, we have an institution which presumably will wish to make a major contribution in both of these fields of activity. What will be its role? How will its activities be coordinated with those of the Ministry of Agriculture?

These would be difficult problems to solve even if there were a close working relationship between the Ministry of Agriculture, on the one hand, and the Ministry of Education and the universities, on the other. They loom far larger where such relationship does not seem to exist. Throughout the entire existence of the Ataturk University Development Committee

there has, to my knowledge, never been a member representing the Ministry of Agriculture. In my opinion there definitely should have been. Further, during the first four months of my activity here, I have seen no evidence whatever of a desire on the part of the Ministry of Education or the Ataturk University Development Committee to seek the advice of the Ministry of Agriculture on these significant questions which can be resolved only through joint action. I trust that such desire does nevertheless exist.

It appears unwise to propose the addition of a man from the Ministry of Agriculture to the A.U.D.C. at this late hour. As soon as the Rektor and the Dean of Agriculture have been appointed, however, the Ministry of Agriculture will have to be brought into the picture in some way or other. If this cannot be done formally, it must be achieved informally. A close and continuing liaison between the Ministries of Education and Agriculture is essential to the development of a "land grant" type of institution at Erzurum. Without it, there is good reason to believe that Ataturk University may become merely another university of the traditional kind.

We feel confident that there must be a way to solve this problem. In an effort to clarify our thinking on the issues involved before trying to do anything overt about it, we are attempting to familiarize ourselves as fully as possible with the Ministry of Agriculture programs of research and extension through regular contacts and joint activities with the Office of Food and Agriculture of ICA. Dr. W. W. Ray and I attend their weekly staff meeting regularly each Monday at 8:30 a.m., and our Nebraska people frequently cooperate with them on committees, short courses, and the like.

C. ANKARA UNIVERSITY

1. Participant Training Program - During the past Quarter, the following staff members of Ankara University have been sent to the United States:

<u>Name</u>	<u>Field</u>	<u>Duration</u>
Sedat Kansu	Animal Science	4 months
Celal Tariman	Industrial Crop Production; the organi- zation and Administration of a Land Grant University.	4 months
Nurinnisa Ozbek	Soil Science	1 year
Sabahattin Ozbek	Horticulture	1 year

This appears to round out the man-years available to Ankara University under the present budget. Provision for a modest number of additional Participants will presumably be made under any extension of the Nebraska Contract beyond its present expiration date. This would seem to be particularly urgent in a field like Home Economics where a new department is now in process of formation. In view of the needs of Ataturk University for Participant training, however, the allotment of man-years to Ankara University will probably be somewhat smaller than in the past.

2. Summer Activities of Nebraska Staff - The past Quarter has represented a lull in the classroom work on the campus. This has provided an excellent opportunity for field trips and related activities which serve to enrich teaching during the academic year and to broaden the knowledge of our specialists concerning the country in which they are at work.

No effort will be made, at this time, to describe the many field trips which have been made to all parts of Turkey. In each instance, however, a written report was filed by the staff member concerned after his return to Ankara. In addition, regular six-month reports are submitted by all members of our Group. The substance of all these reports will be included in materials sent to Harry Gould for use in his semi-annual report on the Nebraska Program in Turkey.

During the course of the summer, some progress has been made toward the solution of certain problems which beset the paths of our specialists on the campus. Hal Allen, for example, has now worked for about one year at his task of promoting the development of an extension program at Ankara University. To date, the University has not provided him with a counterpart to carry on after his tour of duty here is ended. If this is not done soon, there is grave danger that his splendid work will have been done in vain, so far as the University proper is concerned.

To remedy this situation, Allen and I drew up a statement of the case which we presented verbally to Dean Izmen in a personal conference. The Dean expressed his thanks to us for helping him to see the problem more clearly and promised action at an early date. This conference will be followed up with a letter in due time, outlining the points discussed.

3. Home Economics Department - Substantial progress is being made by the architects on the drafting of plans (ICA-financed) for the new Home Economics building on the Ankara University campus. Professor Paul Weigel and Miss Mary Rokahr are giving careful attention to the details of this development.

Thus far, no funds have been made available from any source for the actual construction of the proposed new building. It is believed, however, that adequate Lira resources will eventually be forthcoming from the Turkish Government or from ICA.

Although the Acting Chairman of the incipient Home Economics Department, Dr. Sabahattin Ozbek, is in the United States at the present time, the work preparatory to its final establishment continues unabated in Ankara.

4. Equipment - A great deal of time has been spent during the past few months on the problem of helping the University of Ankara to get equipment through Turkish customs which has arrived here under the Nebraska program. The difficulties involved are almost unbelievable!

There is perhaps a light on the horizon, however. The University of Ankara has now agreed to appoint one man for each of the two faculties concerned, to handle the customs clearances for all shipments which

arrive. Hitherto, this complicated matter has apparently been left to anyone who happened to be available - a pattern hardly conducive to efficient operation.

In regard to the placement of new orders for equipment, I have called a temporary halt for clarification of policy. A conference will be held shortly with Dean Izmen and Acting Dean Erkol to approve a standard procedure to be followed by all departments in making requests for new equipment. Dr. Schneider is doing the spadework in this regard.

5. Extension of Nebraska Contract - Action has recently been initiated by the University of Ankara to secure renewal or extension of the Nebraska contract in Turkey. There is a very definite desire, on their part, for the continuation of this program. Our Nebraska office has given considerable thought to the problems which must be considered in this continuation, and ICA appears ready to move. Early developments appear imminent.

Report
by

Cecil T. Blunn
Specialist, Animal Husbandry

This report covers the third six (6) months at Ankara University dating from March, 1957 to September, 1957.

During the spring semester I again taught the beginning Animal Breeding Course to the Junior class. This year Dr. McKenzie took 1/4 of the class time for Physiology of Reproduction. Because of this we covered less material this year than last year.

If Physiology of Reproduction is to be incorporated into the Animal Breeding Course, more class hours will be needed. The class should be raised from a two to a three or four unit course. They are trying to teach two distinct subjects in one class and both disciplines are suffering.

The two weeks Dr. Guzgunes was at Ege University I taught the Senior Class in Population Genetics. I doubt that the students are ready for this course. It is largely theoretical and requires much background material which the students do not have.

In mid-April I went with Drs. Yarkin and Duzgunes to Malya State Farm to look over the Akkaraman project that was supposedly being conducted there. We found that more than half the selected ewes had been erroneously mated to Merino rams. No project had been written up and the men at the farm did not remember correctly what had been planned. To me this was positive proof that project write-ups and detailed work plans must be drawn up if any constructive research is to be conducted.

The mistake in the breeding assignment of the ewes was not discovered until this spring although it was made last year. Again this, to me, is

proof that research work cannot be conducted by observing the animals once or twice a year. If the station were being visited once a month, at least part of the ewes would have been salvaged and mated correctly.

On the return from this trip Dr. Yarkin, Dr. Sonmez and I had several discussions on drawing up project outlines for the Akkaraman project at Malya and the Kivricik project at Turkgeldi. I tried to get them to state the objectives of each project in clear, concise terms. It was exceedingly difficult to get them to do this.

I had learned that in Turkey generally the income from sheep is derived in about the ratio of 4:3:1 from milk, meat and wool, respectively. Wherever I talked with farmers or directors of stations away from Ankara the stress was laid on improved milk production. The ministry on the other hand places its emphasis on wool improvement. I tried to find some common ground between these two extreme points of view on which a project could be set up.

I waited about three months for some sort of a project outline to be drawn up. Since nothing was forthcoming I wrote up an outline for Malya considering only fleece improvement and one for Turkgeldi in which both milk and wool were considered. Actually both wool and milk should be considered in all sheep work in Turkey.

The project write-ups should not come from me but from the project leader. The man who writes up a project derives the benefit because he is forced to clarify his thinking on the subject. He must consider all facets of the problem and relegate them to their proper place. Then too, the project write-up should not come from me because I am not going to be here when the work is done. Furthermore, I should not be in the forefront but in the background as advisor. I am afraid they will take the project write-ups that I gave them as finished, whereas they were merely intended to show things that should be considered. The emphasis I placed on various phases probably are not right from the Turks point of view.

As a result of the statistics short course Dr. Harlan and I gave last March, I had a request for aid from one of the men at the Yesilkoy Institute. I worked on his problem off and on for three months. In the end I was able to give him two multiple range tests depending on the accuracy he desired in his results. Dr. Fred C. Andrews, at the University of Nebraska, helped me with this work.

During the summer Mr. Steele and I talked with Dean Izmen on several things which had been started with Dr. Goodding a year ago. We again outlined the value of joining the International Book Exchange sponsored by the Library of Congress; then we brought up the matter of improving library facilities and making use of the material the American library sends out each year; next we brought up the question of what and when we are to teach this fall.

As far as recommendations go, the ones made last year are still valid. Someone should plan the calendar for the entire faculty. There should be compulsory class attendance and the student's grade should not depend on the final examination alone. Outside classroom work should be required.

From the research standpoint the younger men should be given projects of their own. The Department Chairman should not be the leader of all of the projects. He should turn whole projects over to the younger men. Something should be done to foster and stimulate imagination at all levels of the staff.

After the trips this last summer I wonder more and more what I am supposed to do in the Animal Husbandry Department. I have been asked to do more work outside the Department and even outside the University than I have within the Department.

Summary of Report
by

L. L. Claypool
Specialist
Fruit and Vegetable Storage

The assignment as Specialist, Fruit and Vegetable Storage, has been interpreted broadly. Not only has attention been given to factors directly influencing "storage," such as maturity, harvesting and handling practices, standardization, packaging and marketing, but it has been considered desirable at times to give attention to cultural problems as well.

My activities in Turkey have been of two kinds - teaching and observation. The former, while generally self-evident, will be discussed in more detail later. Observation has had as its general purpose the learning of as much as possible about Turkish horticulture, so that (1) teaching in the general field of handling, storage and transportation of fruits and vegetables might more realistically take into consideration present practices and problems in Turkey, and (2) that with a broad knowledge of horticulture in Turkey as well as in the United States, I might be of some assistance to the Faculty and Assistants in the Horticultural Departments of Ankara University and to officials of the Ministry of Agriculture in the selection and organization of research projects.

Statistics on Fruit and Vegetable Production

Fruit and vegetable production in Turkey is very extensive. Some statistical information and general discussion will help to give a clearer picture of these industries and their problems. Table 1 gives statistical data for fruits and nuts for the year 1955 with a few exceptions. The amount of land occupied by vineyards and orchards is impressive and accounts for about 2.1% of the land area of Turkey, and 6.7% of the area of cultivated land including fallow.

A second interesting point is the rapid expansion in the fruit industry during the past few years. Not only do the figures show rapid increases in the area devoted to fruits used fresh, but also in the very large grape, olive, hazelnut, and fig industries. If the present large production of nursery stock by Government nurseries is any indication of future plantings, the area devoted to fruit and nut production should continue to increase.

There are no similar data available for vegetable crops with the exception of melons, onions, and garlic. In 1956, it was reported that melon production occupied about 206,000 hectares, onions about 56,000, and garlic 9,700. Other vegetables including tomatoes, beans, eggplant, peppers, squash, carrots, cabbage, and cauliflower also must occupy large areas. A very rough estimate might place the area devoted to vegetable crops in excess of 800,000 hectares. The Turkish people use large quantities of vegetable crops, and there is no doubt but that the area devoted to their production is increasing.

Travel to Fruit and Vegetable Areas Discloses the Following Production Areas:

Although horticultural crops are grown throughout Turkey, the heaviest concentrations are along the sea coasts.

Hazelnut is the principal horticultural crop along the Black Sea Coast. Turkey is the most important hazelnut-producing country in the world and exports large quantities of shelled nuts to the United States and Europe.

Tea culture is limited to the Black Sea Coast east of Ordu. It is increasing rapidly in volume so that Turkey is expected to produce about 45% of its own requirements this year and may attain self-sufficiency within six to eight years.

The greatest concentration of horticultural crops at the present time is in Western Turkey close to the Aegean and Marmara Seas. It is in this region that most of Turkey's grapes, olives, figs, peaches, and sweet cherries as well as many early, mid-season, and late season vegetables are produced.

The fig industry is mainly centered along the Menderes Rivers with Aydin being near the geographical center of production.

The Mediterranean Sea region is important horticulturally for the production of citrus fruits, bananas and both early and late season vegetables. Most of the oranges and lemons produced in Turkey come from this region.

Central Anatolia, while not presenting the concentration of horticultural crops found in coastal regions, nevertheless produced large quantities of fruits and vegetables. Apricot production, except for very limited quantities for the early fresh market, are grown in Central Anatolia.

Pistachio nuts are also produced in the interior, Gaziantep being the center of the most important production.

Major Problems of Marketing Include:

1. Too many widely different varieties produced.
2. Differing cultural practices produce varying sizes and qualities of fruits making standardization impracticable.
3. Nutritional deficiencies in soils in many parts of Turkey.
4. Insect and disease damage serious in many areas due to small holdings and difficulty in securing proper control equipment.

5. Lack of refrigeration.
6. Lack of adequate transportation.
7. No adequate laws for standardization.
8. Problems of sanitation.

Teaching

During the semester beginning the first of March and ending in late May, I gave a course on the handling and storage of fruits and vegetables. This was taught on the basis of general principles rather than specific details. It was assumed that one who understands principles associated with any problem is in a better position to work out a solution to the problem than if he had learned certain specific information relating to it, but did not understand the principles behind the information.

Teaching was scheduled for six 45 minute periods a week with two periods always consecutive. Two of the periods were listed as being for "practical work," but because of limited facilities for useful laboratory studies, many of these periods were used as additional lecture periods. Lectures in English were translated a paragraph at a time by Docent Dr. Mehmet Dokuzogus, who, in my opinion, did an excellent job. In two 45 minute periods about as much could be covered as in one period regularly, but with less time to devote to explanatory examples. I doubt that this phase of teaching can be improved greatly if lectures are to be given in two languages. In many cases Turkish words do not exist to give a thought and must be coined and then explained at some length.

Report
by

E. C. Conard, Specialist
Range Management

This report covers the second six (6) months of work at Ankara University, November 23, 1956 to May 22, 1957.

WORKING CONDITIONS AT ANKARA

Office

Office conditions are the same as previously reported. Mr. Omer Bakir, Assistant, has served as my interpreter since mid-January when Fahrettin Tosun went to the United States for graduate study.

SCOPE OF ACTIVITIES

Research Work

Little has been done in research except in the field of advising with faculty members, graduate assistants, and men from the Ministry of Agriculture. Many short personal conferences have been held with various in-

dividuals. Included are the following:

Several conferences with Mr. Salih Cinar from the Forestry Department concerning his proposed problem for the doctorate degree. He will study range vegetation improvement on forest lands.

Mr. Nazim Allin from the Ministry of Agriculture, worked in my office for several months during the winter. We had many short conferences concerning his project plans for forage crop trials and demonstrations in Eastern Turkey. Also, I was able to help him from time to time with interpretation of material published in the United States which he was translating into Turkish.

Mr. Sefik Iyibilgin, Ministry of Agriculture, came to my office several times to discuss the work he planned to initiate in the vicinity of Izmir and for assistance in identifying plants collected from pastures at Karacabey Hara.

I spent some time assisting Professor Tarman and Vecdet Erkun in the preparation of a proposed organization for a forage crops and grazing research station.

A small field trial was initiated to study some of the problems involved in revegetation of grazing lands which are heavily infested with annual weedy species.

Some progress has been made in the collection of grass and legume plants from heavily grazed areas. In order to determine growth habits and to obtain seed of plants now growing on areas that are heavily grazed each season, it is necessary to transplant selected plants into the nursery where they may grow undisturbed. This is tedious work and requires a considerable amount of time to obtain a few plants. Nevertheless, I feel that it is extremely important in a country where the plants on native grazing lands seldom, if ever, are allowed to produce seed. The preliminary work done this spring indicates that this procedure will give us more ecological information than I had expected. This project deserves considerable effort and study on the part of those interested in forage crop improvement and in the ecology of grazing lands.

Conferences

Several days during February were spent in formal conferences as a member of the Research Subcommittee of the National Seed Advisory Committee and in meetings of the overall National Committee.

From time to time several of the University of Nebraska faculty members have held informal conferences with the men of the I.C.A. Agricultural Group, particularly Mr. Briggs, Mr. Jenburg, and Dr. Harlan.

Teaching

I taught two courses during the second (spring) semester: 1. Relationships Between Livestock and Pasture - one hour of lecture and two hours of laboratory per week; 2. Improvement of Pastures and Meadows - two hours of lecture and two hours of laboratory per week. Considerable

time was spent in writing lectures, preparing laboratory work outlines and demonstrations, and preparation of teaching aids. Nevertheless, I am dissatisfied with the results. Attendance was poor and irregular with several occasions when no students came to class. As a result, the material covered is about equivalent to six weeks of a four-hour course (three hours lecture, four hours laboratory per week) at the University of Nebraska. I firmly believe that we cannot hope to develop well-trained scientists under this system.

The manuscript (translation) of FIRST BOOK OF GRASSES by Agnes Chase has been submitted to the printer. The text was translated by Mr. Fahrettin Tosun with the final finishing touches by Omer Bakir. This is a profusely illustrated beginning book on the identification of grasses. The illustrations were photographed by the I.C.A. photographer, Hakki Tes. I assumed the responsibility of retouching the prints as needed to make clear cuts for publication.

Work is progressing slowly on the proposed manual for identification of grasses by vegetative characters. Descriptions and drawings of many of the grasses important in Turkey are not available in the literature. Therefore, it is necessary to prepare original illustrations and descriptions. Where descriptions and illustrations are available in the literature, they will be checked with local material before they are reproduced and translated for publication.

Field Trips

Baghdad. Ten days, April 4 to 14, were spent at Baghdad, Iraq, assisting with the Regional Range Management Training Course conducted by I.C.A. The course lasted six and one-half weeks, April 2 through May 18. There were twenty-three trainees representing six countries: Greece (1), Turkey (5), Lebanon (2), Iraq (8), Iran (3), and Pakistan (4).

I found the trainees enthusiastic, attentive, and ambitious to learn. However, all of them apparently were handicapped more or less by language difficulties. All instruction was in English.

It is my opinion that such training could be given much more efficiently and to larger numbers of workers in the field of grazing-land management through a series of short courses in each country. Thus, interpreters could be used; also, materials mimeographed or printed in the language of the country. Specialists working with I.C.A. in other countries might be brought in to assist with the short courses in their particular fields.

A series of courses of five to ten days duration, each dealing with a particular part of the field of grazing-land management might be preferable to one all inclusive course of six to eight weeks. Thus, the time and place could be selected to obtain the greatest good from field work. For example, a course in grassland ecology should be held in the spring when the plants are growing and one or more locations where field trips could be taken to study many different habitats and vegetation types.

In Turkey, the Faculty of Agriculture should take the lead in organizing such a series of short courses, since the primary function of the Faculty is teaching. The program must be developed in close cooperation with the Ministry of Agriculture, however, because most of the trainees would come from that organization.

General subjects for such a series of short courses might include the following:

1. Identification of range and pasture plants.
Methods of vegetation analysis and survey.
2. Ecology and Physiology of forage plants in relation to grazing.
3. Improvement of grazing lands by reseeding. Grass and legume seed production, harvesting, and processing.
4. Grazing systems; the objectives, advantages and disadvantages of each.
5. Management of livestock on grazing lands; breeds, disease control, supplemental feeding, etc.
6. Principles and practices in research on grazing land problems.

Summary of Report
by

Robert L. Fox
Specialist, Soil Science

This report covers the first six (6) months at Ankara University dating from August, 1956, through February, 1957.

The following activities have been given special attention during the first six-month period which the soil management specialist has been in Turkey.

1. Development of an integrated program (field, greenhouse, laboratory) for the calibration of soil tests by means of fertilizer experiments.
2. Training of assistants in laboratory, greenhouse and field techniques.
3. Organizing equipment for use in realizing activity 1 and 2.
4. Teaching of some fundamental principles which will be the foundation for further instruction in soil fertility and assisting in the organization of materials for laboratory teaching.
5. Development of cooperation between various agencies.
6. Field trips to become acquainted with the soils of Turkey and probable nutritional problems.

7. Development of research of a more basic nature which will support (compliment) the objectives of the soil test project.
8. Helping to develop plans for various research projects being carried out in plant nutrition.
9. Writing research papers based on results of research conducted prior to the assignment in Turkey.

A very direct approach has been made in carrying forward the above objectives. The general area of work, calibration of soil tests, was suggested by Dr. Ozbek as being a problem needing attention. Once the project was suggested, further work proceeded with the soil management specialist taking the lead in a manner similar to the role of a project leader on an experiment station project. The philosophy behind this approach is the belief that it is almost impossible to develop or teach good research techniques from the office and that the demonstration and "experience" techniques are a far superior method for teaching than the lecture method. In keeping with this philosophy, the soil management specialist has devoted most of his time to working with the assistants in the day to day operation of the experiments. In this way progress was made on all of the objectives without having to invent artificial teaching situations.

The following gives some details of what was accomplished in a concrete way:

1. Development of a well integrated program for the calibration of soil tests by means of fertilizer experiments in the greenhouse and the field.

A Project Outline (Appendix A) was developed which set forth the objectives of this program together with the importance of the work and some general procedures. It seemed desirable to investigate several methods for each soil test inasmuch as soil testing is now being done in Turkey without first doing enough research for selecting the best methods and without proper calibration of the tests. Two extracting solutions for phosphorus widely used in the United States (NaHCO_3 and Bray and Kurtz No. 1) are being tested. In addition, some European methods are being tried to see how they may compare with these two methods. The NaHCO_3 method is now being used in testing Turkish soils.

Six field experiments with wheat were established in October, 1956. Three of these are on fallow land and three are on land which was in wheat the previous season. Each experimental location consisted of 68 plots (17 treatments replicated four times) in a randomized block design. Variables were N, P and K. The detail plan is in Appendix A. It was hoped that these experiments would serve as guides to proper fertilizer rates for future experiments which would be of the survey type. These would have fewer treatments and would be placed on many soil situations both on the Anatolian Plateau and in the high rainfall region along the Black Sea (acid soils) and the Mediterranean climate of South and East Turkey. No plant data has been taken from these plots.

Soil moisture determination, made at the time of seeding and in the early spring (about March 15), revealed some interesting information. From this information (Appendix B), the following conclusions have been drawn.

- a. There was available soil moisture within the depth normally attained by wheat roots at all three non-fallow locations. This is evidence that some factor is limiting the absorption of water from the subsoil by the roots of wheat at these locations. This explains why wheat in the area begins to show moisture stress soon after rains stop in the spring.
- b. The fallow soil was very dry to a depth of about 18 cm. Measures that will prevent the loss of moisture to this depth would greatly facilitate obtaining fall germination. More shallow cultivation during the fallow period and improved handling of residues will help. The use of wide row spacing and deep planting in furrows may aid fall germination.
- c. The fallow soils contained available moisture to the maximum depth sampled (140 cm.).
- d. Spring samples revealed that even with only about one-third to two-fifths normal rainfall, moisture had been accumulated by the non-fallow wheat from 40-80 cm. depending upon the soil texture and rainfall received. This indicates that with normal rainfall the soil moisture removed by the previous crop will be replenished without fallow. The soil moisture removed by the previous crop below a depth of one meter apparently was not great.
- e. Some leaching probably occurred on the fallow plots even though the amount of rainfall was much below normal. On years with favorable moisture, leaching losses of water and nutrients must be an important factor to consider.

Analysis of soil samples from these plots has not been completed. However, some of the results obtained are presented in Appendix C.

Soil pH values were rather uniformly high. Values usually ranged from 7.8 - 8.1. This is the range of values which can be expected of calcareous soils with little exchangeable sodium.

Calcium carbonate values for the surface soils ranged from about 9% (Ankara non-fallow) to 24% for the Bala fallow soil. The minimum CaCO_3 content of the B horizon of the subsoil was about 12% and the highest value about 70% on an air dry soil basis. Such extremely high values for CaCO_3 pose very difficult soil management problems. Not only will native soil phosphorus be of low availability, but phosphorus fertilizers will be rapidly fixed. For some crops minor element problem can be expected.

The nitrate nitrogen content of these soils gave some interesting results. One soil, Polatli fallow, contained relatively large amounts of nitrate nitrogen. About 14 kg. per donum was present in the 0-140

cm. profile. This should be ample nitrogen for maximum wheat yields even if no further nitrogen was made available during the growing season. Values for Bala fallow and Ankara fallow were about one-third and one-sixth those found at Polatli.

The surface 60 cm. of the non-fallow soils contained much less nitrate nitrogen. The previous wheat crop had exhausted the nitrate and moisture supply. Neither of these had been replenished when the soil samples were taken in October.

Nitrates were present in the non-fallow plots below 60 cm. especially at the Polatli location. The presence of both nitrates and moisture at this depth indicate that some factor is inhibiting root activity. The extremely high CaCO_3 content of the Polatli location (below 60 cm.) is a probable explanation for the apparent lack of root activity in this subsoil. Although this soil material seems to present no physical barrier to root penetration, it must be a very poor chemical medium for growth.

Nitrate samples taken in March indicate some leaching. At Bala (fallow) nitrates had moved about 40 cm. downward. At Ankara and Polatli the nitrates moved downward to a lesser extent. If this kind of movement occurs when rainfall is much below normal, it would seem logical to expect loss of nitrates during years of normal or above normal rainfall.

There was evidence of nitrate nitrogen formation during the late fall and winter months. This was especially noticeable at the Polatli fallow location but was also observed at other locations except Bala fallow.

An estimation of available phosphorus was made by three methods. All of these tests indicate very low phosphorus at all experimental locations. This grouping of all soils in the very low phosphorus range is not good from an experimental standpoint. To calibrate a soil test and compare the merits of various tests, a wide range of phosphorus levels are needed. In order to accomplish this, possible experimental sites need to be selected well in advance so that tests can be made and final locations determined intelligently. It is not likely that sufficient range can be found on soils of the Anatolian Plateau, especially if plot locations are restricted to state farms and experimental stations.

At some stage the results of experimental work must be brought to the attention of farmers. If this is not done, the effort will not have been worthwhile. It is the suggestion of the soil management specialist that a start be made toward accomplishing two objectives by establishing experiments of simple design on farmer's land. These could provide experimental data and serve as demonstrations for farmers.

Soils from the six experimental plot locations as well as three additional soils are being used for greenhouse experiments. The three additional soils are as follows:

- a. Red soil from Tarsus developed on limestone giving a low medium phosphorus test by the Bray and Kurtz and NaHCO_3 methods.
- b. Alluvial terrace soil from the Ceyhan Valley near Toprakkale. This soil probably has been influenced by volcanic ash. A small cinder cone is located about 10 km. distant. This soil gave a low medium phosphorus test with the Bray No. 1 extractant and low by the NaHCO_3 .
- c. Lake soil from a low-laying area near Tuz Golu. This soil tests very low in phosphorus.

Two test plants (oats and leaf lettuce) are being used in the greenhouse. Both plants are being used on the six soils representing the wheat experiments. Only lettuce is being used on the three additional soils.

The fertilizer treatments are as follows:

1. No treatment
2. $\text{N}_1\text{P}_1\text{K}_1$
3. $\text{N}_0\text{P}_1\text{K}_1$
4. $\text{N}_1\text{P}_0\text{K}_1$
5. $\text{N}_1\text{P}_1\text{K}_0$
6. $\text{N}_2\text{P}_3\text{K}_1$
7. $\text{N}_0\text{P}_3\text{K}_1$
8. $\text{N}_2\text{P}_0\text{K}_1$

No yield data is available from these plot experiments but visual response, especially from nitrogen, was easily seen on the non-fallow soils from Ankara and Bala within two weeks after the oats were planted.

The fertilizer material and rates of application used were as follows:

- $\text{N}_1 = 40$ p.p.m. N as NH_4NO_3
- $\text{N}_2 = 80$ p.p.m. N as NH_4NO_3
- $\text{P}_1 = 80$ p.p.m. P_2O_5 as $\text{Ca}(\text{H}_2\text{PO}_4)_2$
- $\text{P}_3 = 240$ p.p.m. P_2O_5 as $\text{Ca}(\text{H}_2\text{PO}_4)_2$
- $\text{K}_1 = 40$ p.p.m. K_2O as K_2SO_4

Four replications are being used. This gives a total of 480 pots. The pots being used are tall juice cans of approximately 0.4 gallon capacity; 1500 grams (over dry) soil is used in each pot. They are painted on the inside with asphalt paint. In addition, some are lined with polyethylene bags. Results in former years at Nebraska have indicated that this type of container gives results of the same value as larger pots and has a decided advantage over the latter in being easy to handle, requires less soil, water and space, and are much easier to pot. Water is weighed into these pots three times

each week; at other times water is measured into each pot in amounts approximating that currently being removed by evaporation and transpiration.

2. Training of assistants in laboratory, greenhouse, and field techniques.

One of the greatest pleasures of this first six-month period has been that of working closely with the assistants. They have been eager to learn and have not been timid about asking questions. The following are some of the procedures which have been developed.

a. Field

- 1) Location of field experiments and arrangements of plots and replications in relation to slope and soil characteristics.
- 2) Calibration of fertilizer equipment.
- 3) Taking soil samples for analysis.
- 4) Fertilizer application.

b. Greenhouse

- 1) Taking the soil samples.
- 2) Adding fertilizers, potting the soil, planting, watering.
- 3) Determination of moisture content at approximate field capacity.

c. Laboratory

- 1) Plant samples.
 - a) Digestion procedures.
 - b) Total phosphorus.
 - c) Total potassium.
 - d) Total calcium.
 - e) Total nitrogen (Steam distillation).
 - f) Potassium quick test.
 - g) Phosphorus quick test.

d. Soil analysis

- a) Moisture.
- b) Available phosphorus - three methods.
- c) pH.
- d) CaCO_3 .
- e) Nitrate nitrogen.
- f) Approximate field capacity.

- g) Cation exchange capacity.
- h) Exchangeable potassium.
- i) Calcium and magnesium in the NH_4 acetate extract.

Much effort was devoted to teaching the procedure for making standard solutions, developing standard curves, making calculations and operating equipment such as the flame photometer, photometer, pH meter and steam distillation apparatus. The soil management specialist has worked with the assistants in doing all of the routine duties of the field, greenhouse and laboratory which have been done to date.

3. Mobilizing and organizing equipment for use in the greenhouse, laboratory and field.

Since most of the facilities used in developing the soil management program had not been used before, there was need for some sane organizational work. The following are examples of items which have required attention: (1) design of greenhouse bunches, (2) heat in the greenhouse, (3) floor for the greenhouse, (4) pots for greenhouse experiments, (5) containers for soil samples, and (6) automatic pipettes.

4. Teaching.

One formal course is being taught; this course meets one and one-half hours each week. Although it is called a seminar, it differs very little from an American beginning graduate level course in soil fertility. An opportunity is given for questions at all times and the soil management specialist asks questions as an aid in bringing out discussion. The interpretation seems to be good.

Some help is being given in the organization of materials for an undergraduate laboratory which meets one hour each week. One great teaching need is for more well-organized laboratory time for the undergraduate students. Present teaching facilities in the department (laboratory) have been used for teaching at less than 10% capacity. The senior assistant of the department has shown exceptional ability in the organization and presentation of laboratory material but only one hour each week is scheduled. The students are very pleased with this laboratory.

5. Cooperation.

Experimental plots have been established at the Ankara Experiment Station and two State Farms but cooperation as applied to work between research agencies in the United States does not seem to exist. It is the opinion of the soils specialist that no big advance will be made in solving agricultural problems in Turkey until the necessary cooperation and coordination is established.

6. Field Trip.

One field trip has been taken to become acquainted with some soil and

plant nutrition problems. Soil samples were taken which represented a wide range of conditions of parent material and climate. Phosphorus has been determined on these samples by two methods. Other analyses are in progress. In general, the values obtained by both methods (Bray No. 1 and NaHCO_3) give very low values. About 20% of the samples tested medium or high by one or both methods. However, in some cases there was not good agreement between the two methods. This type of study should be expanded so that a better foundation of information will exist for future work in the area of soil test correlations.

7. Development of research which will compliment the objectives of the soil test project.

It has long been recognized that a responsible research worker should be encouraged to independently seek out answers to questions which fall within his area of work. That is, an investigator should be given freedom to exercise his abilities in his field of work. Exercise of this freedom should not interfere with normal progress of his specifically assigned duties. However, the freedom should be exercised sufficiently so that the investigator remains alert to the problems which continually need to be solved and acquainted with methods by which he can solve these problems.

To demonstrate this idea and to satisfy his own curiosity, the soil management specialist set up a small experiment designed to achieve objectives 1 and 2 of a project which he found personally interesting. A project outline entitled "Solubilization of Soil Phosphorus in Calcareous Soils by Plants" is presented in Appendix D. Ten species of plants are being grown in greenhouse pots with and without phosphorus on a calcareous soil.

This work has not progressed far enough to answer the questions which were originally asked; however, the experimental material has proved useful in the following ways:

- a. Symptoms thought to be those of potassium deficiency were observed on soybeans.
- b. Non-legumes indicated the greatest need for phosphorus (visual response).
- c. Symptoms of poor nodulation of legumes, nitrogen deficiencies of non-legumes and symptoms of potassium deficiency in soybeans were demonstrated to students.
- d. Plant material from this experiment was used to demonstrate tissue tests.
- e. Since this was the first greenhouse experiment observed by the assistants, it served as a valuable training aid.

- f. Some needs in the greenhouse were demonstrated.
 - g. Opportunity is being given to try new techniques such as the phosphorus content of leachate from soils in which plants are growing.
8. Helping to develop plans for various research projects being carried out in plant nutrition.

Work in this area has been rather limited. Some attention has been given to a cotton experiment at Tarsus and to an experiment on the composition of farm manure.

SECOND SIX-MONTH REPORT

March 1 - August 31, 1957

by

Fred F. McKenzie
Specialist, Artificial Insemination

Teaching:

1. Eighth semester veterinary students (39) were given a course in artificial insemination which included demonstrations - one of which was at the local insemination laboratory.

2. A laboratory practice course was conducted for twenty-four tenth semester veterinary students who elected this work. This was at Karacabey Hara. The students were divided into six groups of four each so that each student actually collected semen from a stallion, a bull, and a ram, evaluated semen, processed semen for preservation, and inseminated females of each of the three species. The response on the part of the students in getting this drill was excellent.

3. Sixth semester agriculture students were given six lectures on livestock fertility and artificial insemination.

4. Graduate counseling was with Ph.D. candidates. These men have worked on the haras and are each trying to write a thesis based on their observations.

Another group of advisees has been those anticipating study and travel in the U.S.A. An effort has been made to help these people clarify their objectives and to have them visualize more specifically what is and is not available in their respective areas in America and might be useful to learn and to bring back to Turkey.

5. A short course in A.I. for twenty-seven graduate veterinarians was sponsored by the Ministry of Agriculture and held at the Karacabey Hara. The supervisor, Dr. Ilhami Kaan, provided drill in collecting, evaluating,

and processing semen and in inseminating females. He was elated with the response of the participants in having this opportunity and expressed appreciation for having seen this method of teaching when the tenth semester students were in class earlier this spring (paragraph 2 this section). My lectures had to do with the estrual cycle, ovulation and its control, and superovulation. Fifty slides and a motion picture on ovulation in the ewe were used in these presentations.

Research:

My recommendations on research for the Zootechnic Institute made in my first six-month report still stand.

Two rooms have been assigned and will be equipped for frozen semen research. The Institute has agreed to provide in this laboratory a 5° Centigrade room. The Nebraska University-I.C.A. equipment on order and now enroute will make possible research in this field.

Training Assistants:

Dr. Afif Savinc, Assistant in this Institute, has acted as my interpreter in the classroom this past semester and will continue 1957-58. He has in preparation a class manual (in Turkish) for each course of mine which he hopes will be helpful to the students and faculty following my departure.

Professor Selahattin Batu, Director of this Institute, has returned from his year in Great Britain and will be of great help this year. I look forward to many worthwhile conferences with this endowed leader in Turkish education.

Consulting Work:

This has been chiefly with Dr. Enver Erlat, Ministry of Agriculture, and personnel at the haras and agricultural experiment stations.

Upon request I brought in several recommendations for improvement in the artificial insemination program, these to the director of Karacabey Hara.

Additional observations were made at these centers in Turkey:

The Merino Breeding Farm, Bandirme
Konya Hara, Konya
Cukurova Hara, Ceyhan
Karakoy Hara, Bafra-Samsun
Cifteler Hara, Eskisehir
Orman Ciftlik, Ankara
Altundere Hara, Erzis
Sultan Suyu Hara, near Malatya
Cattle Breeding Station, Gole

Gelemen Agricultural Experiment Station, Samsun
Igdir Agricultural Experiment Station, Igdir

Meat Packing Plant, Ankara

Bursa Woolen Mills, Bursa
7th Annual Wool Show, Bursa

Sugar Factories at Erzurum and Kayseri

Some Impressions and Ideas of This Observer:

The Turkish Merino seems to be a most valuable sheep. It is big, attractive, smooth bodied, a good forager, and a good breeder. This should be a most important factor in improving certain sheep for the production of wool suitable and in the quantity demanded by the wool mills.

The work of the haras would be enhanced by the addition to the central staff of a professional range management man. This expert could help in bringing about a more dependable forage supply of the quality and of the quantity suitable to the needs of the various parts of the Republic.

Ankara University and the Ministry of Agriculture are moving forward in a steady and safe way in the field of fertility and artificial insemination by insuring their top men adequate training (two men in Sweden this year). The program, once developed, should be a good one and reasonably adequate. This Institute has a real responsibility in supporting such a program with a strong research project to provide techniques and also facilities for training personnel.

The staff at each hara and breeding station could well develop a list of projects suitable for Ph.D. candidates to tackle. Thus, all four would profit mutually - that is, the candidate would have a worthwhile project to undertake, the University would be able to offer professional advice and keep in touch with problems in the industry, the hara would gain by the problem being solved, and the Ministry of Agriculture would have been served by such integration and cooperation.

To illustrate the type of project that could be undertaken, I cite this problem. At Karakoy Hara the 1956-57 records reveal twenty-seven (27) of one hundred thirty-seven (137) cows failed to show estrus (20%). Sixteen (16) more of the one hundred thirty-seven (137) were bred once, failed to return in estrus but did NOT calve (12%). WHY? Estrus very short so it was overlooked? Reproductive organs infantile? Deficiencies inherited??? This and other problems of genuine economic significance could be investigated with profit to all parties concerned with food, fiber and work production, and with no additional personnel above the numbers now employed. Generally, the hara personnel have been high calibre people, alert and capable.

The quality of the Arabian horses at the Haras has been good, and in some cases excellent. Here is a market American and British horse lovers could well investigate. Turkey might advisedly seek to sell many top quality Arabians with mutual advantage to all, not the least gain would be in the U.S. dollar flow to Turkey.

Whenever foreign livestock is introduced, it will be most important that

valid comparisons be made between crossbreds and local herds. For example, if Herefords are crossed on Eastern Reds, then a comparable herd of Eastern Reds must be set aside and observed in exactly the same way as will be crossbreds, the same records kept, the same year and season, the same feed and management. Otherwise, the comparison would not be valid and erroneous conclusions may be drawn.

The Seventh Annual Wool Show at Bursa, June 26-27, 1957, was superbly well done. The fleeces were from privately owned farm sheep so there was keep public interest. The display was excellently arranged, and the card on each fleece provided pertinent information that made the whole exhibition of real educational value. I urge that such a display not cease with one showing, but that it be trucked from village to village and scheduled repeatedly throughout the country where it is considered feasible to produce these kinds of wool. A tape recording could be made and played at intervals throughout each day of a show. It would be of real help to many farm folks, be excellent advertising for the Ministry, and make for progress in the Republic.

There is pressing need for translation into Turkish of well selected material that can be useful to students and professional people alike. At present, good literature in Turkish in reproduction physiology, fertility, and artificial insemination is practically non-existent. Such material should be chosen wisely, translated and made available at the earliest possible date.

This specialist continues to feel grateful for the privilege of working with his Turkish colleagues and students, and is confident that progress is being made in the struggle to help good people help themselves to more of this world's good living.

Report
by

Mary Rokahr
Home Economist

This report covers the progress towards the establishment of a Home Economics Department in the Agricultural College, University of Ankara, during the second six (6) months of work, January 1 to July 1, 1957.

PART I

Progress towards specific objectives as listed in the basic project.

A. Undergraduate and graduate training and research objectives.
There has been little change in the status of work toward objectives on undergraduate and graduate training and research programs for the Home Economics Department except for the major undertaking of offering a course in Home Economics Philosophy and Content to Agricultural College juniors and seniors.

Undergraduate training to Home Economics Department students will not

be offered in September, 1957, because of lack of staff and necessary physical facilities. A tentative date, depending on financing of the Home Economics building, has now been set for September, 1960, by Sabahattin Bey, Acting Head of the Home Economics Department. It is hoped that undergraduate training can be offered starting with non-laboratory courses and basic arts and science courses in September, 1958, or at least September, 1959.

Home Economics Philosophy and Subject Matter Content. The first undergraduate course in Home Economics was offered College of Agriculture students the spring semester of 1957. The purpose of the course was to give agricultural students an opportunity to learn about the philosophy and content of Home Economics and to provide them with family living and homemaking knowledge that they could use in daily living. Another purpose was to interest students in enrolling in the Home Economics Department when it is opened. Among the women students who took the course, eight indicated an interest in working with the Home Economics Extension Service at once.

Twenty-one lectures (see Appendix I for lecture titles) were given to junior and senior agricultural students enrolled from General Agriculture, Food Technology, Agricultural Economics, and Horticulture Departments. Eighty-four students were enrolled and seventy-eight took the final examination. A summary of student's grades is as follows:

Grade 10 - 1 students	Grade 5 - 3 students
Grade 9 - 20 students	Grade 4 - 1 student
Grade 8 - 23 students	Grade 3 - 3 students
Grade 7 - 17 students	

During the spring months, a major part of the time was devoted to preparation of the lectures and visual aids. Charts are now available for six lectures. Two lectures were presented with Kodachrome slides and the students were taken on a visit to the Girls Institute to see a model homemaking apartment. The lecture notes complete in English and Turkish are now on file. Refika Dogan prepared the Turkish lecture notes that were mimeographed and given to students. Refika acted as interpreter and College of Agriculture staff were cooperative, interested and supported the course among students. Attitude of students was on par with student attitudes and interest at University of Connecticut. The language barrier is real, but Refika's enthusiasm and esprit de corps with students helped to make the course a success.

B. Short Course. Plans have been made with Mary Border, I.C.A. Home Economist, and Suheyly Teoman, Turkish Home Economist, to participate in an in-service training course for Home Economics Extension workers to be held at Bornova, September 2 to 15. It is anticipated about thirty-five homemaking teachers from agricultural and Home Economics high schools and Home Economics Extension workers will attend.

C. Organization of the Home Economics Department. 1. Staff: In January, 1957, Suat Kundak enrolled for graduate work in Home Management-Family Economics at Purdue University. Reports from Purdue staff members

indicate that Suat is making good progress in her studies.

Ayse Erkut in January, 1957, started work towards a Doctor's degree at Kansas State College, Manhattan, Kansas. In the early spring, Ayse reported that she was not satisfied with either her work at Kansas State College or the living conditions, and stated that she wished to be transferred. Reports have reached us that she made good grades in two subjects but was not as successful in the third one. She is continuing her work in Kansas through summer school session. Dr. Baker and Sabahattin Bey, who will be in the United States in September, will at that time discuss Ayse's future program of work with her.

Sabahattin Bey requested that the University of Nebraska send Refika Dogan who is an Assistant in the Home Economics Department, to the United States for two years' graduate work in child and family development. Plans are underway to send Refika to the University of Nebraska where she will first need to take basic Home Economics courses before enrolling for her Master's degree in the child and family development field. We hope to have Refika Dogan's papers completed so she may enroll at the University of Nebraska Home Economics Department in September, 1957.

Rezan Sahinkaya completes her two years' work at the University of Nebraska in September and when she returns, it is anticipated that she will take leadership in the continued development of the Home Economics Department. With Refika Dogan's advanced training program underway, staff members to teach major areas of Home Economics are complete except for clothing and textiles, home furnishing and applied art.

2. Physical Facilities: The competition among Turkish architects for the Home Economics building plans was held March 26-27-28, 1957. Twelve architectural firms presented plans and two committees functioned in arriving at the final decision. The Advisory Committee was made up of Turkish and American Home Economists who gave advice regarding objectives of Home Economics and how the building plans could carry out these objectives and aided in evaluating the functional plans for laboratories, classrooms, and other facilities.

Advisory Committee members were: Zatiye Delibeyoglu, Girls Teacher Training Institute; Elizabeth Gorvine, United Nations Vocational Home Economics Consultant; Mary Rokahr, University of Nebraska Home Economist; Esther Pond Smith, Home Economist, University of Nebraska Group; Leman Subasi, Girls Teacher Training Supervisor; Norman Smith, I.C.A.

The Technical Committee was responsible for the architectural soundness of the plans and made the final decision. Technical Committee members were: Sezai Erguc, Architect, Ministry of Education; Turgut Gokberk, Architect, Ankara University; Sabahattin Ozbek, Dean, Faculty of Agriculture; Stanley Smith, Architect, University of Nebraska-Ankara University Group; Ismet Turkalp, Architect, University of Nebraska-Ankara University Group; Prof. Muttalip Uslu, Agricultural College, University of Ankara.

An excellent plan was selected that was submitted by Ankara architects Vedad Yalcinkaya and Kadri Kalaycioglu, Isiklar Cadessi Isikhan, No. 22/34-

35, Telephone 18440. (See Appendix II for Home Economics building plans.)

Plans submitted by architects that received second and third awards had certain well-planned features such as nursery school which can be included in the final building plans. The Agricultural College has drawn up a contract with the architects and during the next six months, detailed plans for lay-outs of laboratories and classrooms will be undertaken with the help of Paul Weigel, University of Nebraska-Turkish Program Architect.

D. Office Furniture. Office furniture for one Home Economics Department office was purchased with the College of Agriculture funds. Stanley Smith, University of Nebraska Architect, gave the Home Economics Department the fee of 1500 Lira which he received for acting on the Technical Committee for the Home Economics Department architectural competition to purchase such articles as rigs or other equipment that could not be purchased out of regular funds. This money has not yet been used.

E. Library. Some progress has been made in cataloging Home Economics books and bulletins. Twenty-four university and college textbooks have also been ordered through the College of Agriculture.

F. Home Economics Department Budget. Budget plans drawn up for Sabahattin Bey for the Home Economics Department were limited to purchases of office equipment and supplies. Sabahattin Bey reports that 6,000 Lira have been allocated to the Home Economics Department from the Agricultural College budget but that the Department may also secure funds from the University of Nebraska-University of Ankara budget if needs arise during the next six months.

PART II

This section of the report covers progress made by Mary Rokahr, Home Economist assigned to aid in establishing the four-year college course in Home Economics, towards the following objectives:

- A. Continue to learn more about Turkish family living conditions; status of women and children; general economic conditions and potentialities of improving consumption patterns of Turkish families.
- B. Continue the development of cooperative relationships with Home Economics staff engaged in other homemaking educational programs; Turkish Womens Club; Public Works programs, and others.
- C. Contact and develop homemaking programs with ministries and organizations such as Public Works on village housing; Nutritional status of soldiers by Army; College of Agriculture food technology research; Ministry of Education and Home Economics curriculum revision and others.
- D. Continue work towards recruitment of outstanding well-qualified staff; development of adequate functional attractive Home Economics building and facilities; development of curriculum and cooperative relationships with other College of Agriculture departments and staff.

A. Village Housing. In January, Jack Steele, Ali Bey, Assistant in Agricultural Engineering, and I conferred with Bernard Wagner, I.C.A. architect who has been developing plans for "aid self-help housing in Turkey." Following this conference, Mr. Wagner through Public Works developed a committee which had two meetings to discuss ways and means of improving village housing. Groups represented in the committee included Ministries of Education and Agriculture; Public Works; agricultural banks; Agricultural College; Home Economics Department, and Extension Service. Later the committee took a trip to several villages near Ankara to decide on possible demonstration villages.

Follow-up plans in relation to village housing will be handled primarily by the Extension Service but the College of Agriculture Home Economics Department Staff will continue to assist by providing housing information and "know-how" for improvement of village household equipment and arrangements.

B. Nutrition: Two nutritional activities of interest to the Home Economics Department have been developed during the last six months in Turkey. A U.S. Army group came to Turkey to assist the Turkish army staff in making a nutritional study of soldier recruits. In connection with this program, Dr. Kertesz (Cornell University) held several conferences with the Home Economics Department staff on procedures in setting up a permanent Nutrition Council. The findings from this study should be analyzed and used in connection with food and nutrition educational programs developed by the Home Economics Department.

Ninette Van Dom (F.A.O.) continued the study that she has been conducting in villages regarding the nutritional status of families in connection with a school lunch program. Miss Van Dom's report should also give us factual information that will be useful in college educational programs.

C. Homemaker's Club. Mualla Arkaca, who is Executive Secretary for the Turkish Womens Association, contacted me early in January to ask for my assistance in developing homemaking clubs among the low-income families in cities. It has been a privilege to get acquainted with this fine group of influential women, and I assisted them in outlining a year's homemaking program and have given special assistance to Mrs. Hacer Boray and others on demonstrations on efficiency in housework, elimination of fatigue, and money management. Mualla Arkaca wrote an article about homemaker's clubs for the Turkish "Time" magazine in which she gave credit to me for the help given her. The Turkish Women's Club leaders are doing the teaching themselves this year, assembling written materials and visual aids which they can distribute and use in an expanded program during the coming years. (See Appendix III - Homemakers Club Program).

D. 4-K Groups. The Agricultural and Home Economics Extension staff during March started the 4-K Group work in Turkey. This group is similar to our 4-H Club work. I was asked to give a talk on Home Economics in 4-K Groups at an in-service training conference when this project was launched. I also gave assistance to Fikret, a 4-K staff member, who is writing the literature on sanitation and food and nutrition. I also attended two village organizational meetings in Ankara Province and observed the progress of the work in Izmir Province.

The homemaking program is centered on sewing with girls participating in other projects such as beekeeping, poultry, and vegetable gardening. Turkish village teachers, both men and women, are being enrolled as group leaders. Since village women teachers have usually had good training in sewing, this phase of 4-K group work will probably be successful. The method of reaching and teaching 4-K groups is different from methods used in the school, but what is taught in sewing is almost identical with practices taught in primary and orta school classes. Further study should be made by 4-K staff to add to sewing knowledge taught girls rather than to merely duplicate what girls would probably learn in school anyway.

E. Ford Foundation Committee Visit. In January, Dr. Lela O'Toole, Dean of Home Economics, Oklahoma A and M College, Dr. Cozine, also from Oklahoma, and Dr. Muriel Brown, Office of Education, Washington, D. C., made a five-day visit to Ankara at which time the staff of the Ministry of Agriculture and the Agricultural College cooperated in developing a program to further Home Economics education in Turkey. A conference was held at the Agricultural College for heads of departments who will be teaching certain Home Economics courses at which time the visiting committee gave impetus to a broad college-level program in Home Economics education. (See memorandum of January 29, 1957, to Dean Baker for details.)

F. Field Trips. Two major field trips have been taken in the last six months for the purpose of becoming further acquainted with homemaking in different parts of Turkey, and assisting in the development of improved curriculum at agricultural and homemaking high schools. A visit was made to Mersin, Alata agricultural and homemaking high school, and surrounding area. A return visit was made to Izmir at which time the work of the Home Economics Extension students was observed as well as the province Home Demonstration Agents. A field trip was also made to Hasanogalu near Ankara, a typical teacher training school for village teachers. I was well impressed with the physical set-up and with the type of activity that was going on at this teacher training center.

Field trips have also been made to villages in connection with developing an educational program for the improvement of methods for washing clothes. Norman Smith, I.C.A., had had built washboards, plungers, and a hand-operated washing machine. These were taken to villages and tested. As is usual, many problems arose about the use of this type of equipment, but it is a fine start toward an important program. The Home Economics Extension Service and College Home Economics Department will need to pool their knowledge and develop better household equipment not only for washing but also for cooking and the many other activities carried on in the Turkish village home.

G. Turkish Home Economics Association. Plans to organize a Turkish Home Economics Association have not made as great a progress in the last six months as I had hoped might be made. Three meetings have been held, and I am not quite sure why the group has been unable to complete the necessary preliminary work. At present the constitution and by-laws that must be approved by the government before the organization can be formally launched are in Refika Dogan's hands. She will try to secure signatures from eight to ten

leading Home Economists during the summer months. Once the constitution and by-laws have been approved by the government, the signers can call a meeting to organize the Association officially. I shall endeavor to help the group, but I think there is danger in trying to force the organization until the Turkish home economists themselves are ready to move without too much urging on the part of Americans.

H. Home Economics Vocational Education. An important national Home Economics vocational educational meeting was attended March 18-22, 1957, at which time the Ministry of Education accepted a new curriculum for homemaking vocational education that had been developed by Mrs. Gorvine, UNESCO program, and Turkish Ministry of Education staff. This report, "Evaluation and Recommendations for Programmes of Girls and Womens Vocational and Technical Education in Turkey", reviews the history of homemaking education in Turkey, gives factual data on present curriculum, and makes drastic recommendations for changes which on the whole were adopted by the Ministry of Education. (Copies of the report are available from the Home Economics Department Office.)

Mrs. Gorvine was also able to have installed in the Girls Institute a model apartment of one bedroom, bathroom, dressing room and necessary storage, living room, dining room, kitchen and laundry. The kitchen and part of the laundry equipment came from the U.S.A. In the laundry there is a combination of modern equipment and built-in tubs made by Turkish workmen. The storage cabinets and furniture have been built by Turkish vocational education students. The draperies were made by Home Economics students.

The purpose of the apartment is to demonstrate to industry possibilities of furnishings and equipment for higher income level homes that can be made in Turkey. The apartment also demonstrates the principles of functional arrangement, color and textures. Mrs. Gorvine and Turkish home economists also worked with Public Works and Ministry of Education architects in planning two model houses for families who are in lower income brackets.

Several conferences on Home Economics education have also been held with Leman Subasi and Zatiye Delibeyoglu who are staff members of the Ministry of Education. These two Home Economists were also on the Advisory Committee for the choice of the College Home Economics building architects.

I. Home Economics Extension Service. Norman Smith requested help in developing a Home Economics Extension budget and details were developed with Suheyila Teoman. Also, plans were discussed with Norman Smith regarding the type of household equipment that might be developed by industry in Turkey. The list included such articles as patterns, laundry equipment, stoves, baby food, canning equipment, measuring cups and spoons, brooms, brushes and other cleaning equipment, and tin-covered copper cooking utensils.

J. Research Study in Tarahana. Bahryie, a member of the Experiment Station in Izmir, has been assigned to the University of Ankara, Agricultural College, during the last six months to make a study of a dried soup mixture called Tarahana which villagers made and like. Bahryie collected 120 samples from different villages and has made an analysis of the carbohydrates, minerals, vitamins, and other content. She is now developing a standard recipe. Considerable help has been given to Bahryie in her contacts with

American research staff members and commercial firms helping her collect information on how to develop testing panels and standard formula for flour-soup mixtures. The results of this study will be made available to the Army and commercial firms who make Tarahana for the Army. The recipes will also be used by the Extension Service to improve quality and nutritional value of Tarahana made by village women for home use.

K. Home Economics Extension Service Examinations. The Extension Service asked me to act on an examination board of three for Home Economics Extension workers who might be sent to the United States under I.C.A. or Turkish Ministry of Agriculture scholarship grants. Following the examination, the three examiners, Suat Kundak, Suheyyla Teoman, and I, developed recommendations which were sent to Dean Ozbek suggesting changes in the procedure. At the present time, the final decision as to who would be sent was based on the written examination. We have suggested that changes be made in the procedure which would allow points for experience and performance, training and academic standing, personality and possibility of success as well as the oral and written examinations.

PART III

Plans for July 1, 1957 to January 1, 1958.

A. Home Economics Building. During the next six months, it is planned to work out the details for the Home Economics laboratories including the equipment and placement and to make the necessary lists of equipment to be purchased in Turkey, from the United States or other foreign countries. It is also anticipated that considerable time will be spent with the architects as they continue to develop the plans for the Home Economics building. It will be of untold help to have Paul Weigel's assistance in developing the details for the Home Economics building.

B. Home Economics Philosophy and Subject Matter Content Course. Sabahattin Bey has recommended that this course be repeated in the fall semester. Rezan Sahinkaya will act as interpreter if Refika Dogan goes to the United States in September. Since the English and Turkish lectures have been written, during the next six months further attention will be given to the development of visual aids, special assignments and study materials for students.

C. Ege University. If Dean Taysi requests help in giving Home Economics courses at Ege University, the decision has been reached with Sabahattin Bey that consideration will be given to such a request.

D. Home Economics Extension In-Service Training Short Course. Plans for this short course have been developed with Mary Border, Helen McCune and Suheyyla Teoman. The short course will be held the first two weeks in September, and I plan to give lectures and laboratory work on home management, money and time management, and kitchen improvement during the first week. Teaching materials and visual aids must be prepared for this short course.

E. Field Trips. Tentative plans are being made for field trips to Samsun, Trabzon and the Black Sea Coast to get a better background understand-

ing of family living and to become acquainted with the handicraft work that is carried on in this area.

Other areas to be visited in Turkey are Kayseri and surroundings and Bursa. Sometime during the next six months, I hope also to return to Istanbul and visit the American School for Girls at Uskadar and follow up contacts made at the Ataturk Kiz Lycee and the American College for Women.

F. Patterns of Living of Turkish Families. A major undertaking for the next six months will be outlining a questionnaire and method of procedure of a study on patterns of living of Turkish families. We are in much need of factual data regarding how Turkish families live not only in villages but also in smaller towns and cities. It is hoped that a comprehensive study can be inaugurated in cooperation with the Ministry of Agriculture, Extension Service and perhaps other Ministries such as Education, Health, and Public Works.

The study will have a two-fold purpose - to secure factual data upon which to base educational, industrial, and commercial programs, and to provide material for doctor's thesis for Home Economics staff members. Ayse Erkut who is studying nutrition, might make the analysis of food habits of the Turkish families; Suat Kundak could use the material in making analysis of family income and use, housing, household equipment and managerial practices of Turkish homemakers. If the study is comprehensive enough, Refika Dogan could make a study and analysis of child care and development as now practiced by Turkish families.

G. Translation of Home Economics Textbooks. When Rezan Sahinkaya returns in October, it is anticipated that we will study the needs of the Home Economics Department for Home Economics texts and bulletin materials and that a long-time plan will be inaugurated for the translation of the needed textbooks and bulletins for use in the Home Economics Department.

Report
by

W. W. Ray, Specialist
Plant Pathology

One year has passed since my arrival in Ankara as Specialist in Plant Pathology. This second report, then, covers the period since January 1, 1957.

In the second semester I gave a course in elementary plant pathology. Lectures were written and given to Mrs. Duzgunes, my translator, for study in advance. I usually found that I presented less material than prepared in writing. Holidays and absences due to trips reduced my actual lecture time to about eight double periods. This is not enough time to develop a satisfactory course, and I hope that some provision can be made to increase the lecture time next year. Not all of the students enrolled in my course took the final examination, but of those that did, some achievement was evident. I believe that the students learned very well. Next year the students may be divided into three groups for the lectures, thus greatly increasing the teaching load. I should like to see the young docent, Dr. Karaca, have an

opportunity to share some of this teaching. It is also planned to give a series of informal lectures to the assistants and docents of this department on the subject of sexuality and genetics of fungi.

More material will be added to the written lectures during the summer and fall. Eventually, if all of these are translated and mimeographed, the students would have a fairly useful reading outline on plant pathological principles and suitable examples of important plant diseases. There is now no suitable Turkish textbook in Plant Pathology.

A new pre-doctoral student, who speaks English, has come to this department since the last report. I spend some time helping him, and he interprets for me on trips. He holds much promise.

Laboratory facilities in plant pathology are entirely inadequate here for research other than taxonomic. Essential items of equipment and supplies have been ordered. It is hoped that these arrive before I leave so that opportunity will be available for teaching some of the common techniques of handling living organisms in the laboratory. This phase of plant pathology is badly needed to give a rounded training. Since the departure of Dr. Goodding, I have taken over his duties at the College. This involves a certain amount of liaison work between our Nebraska Group and the Turkish faculty. The work in this area should expand in the fall semester. Also, each week I attend the meeting of the Agricultural Group of I.C.A. and the Ataturk University Committee. For the latter considerable time has been expended on drawing up equipment lists for various laboratories.

The Ministry of Agriculture sent me on a trip to the Dalaman Citrus Station in March to observe a bacterial disease of citrus. Recommendations for control were drawn up by the pathologist from the Bornova Institute and myself for transmittal to the Ministry.

Trips are planned for this summer and autumn to the Plant Protection Institutes in Samsun, Adana, Elazig and Adapazari, and perhaps to other laboratories. Some advice on problems being conducted at Bornova, Samsun, and Gaziantep has been given to staff members who have visited me, and I am anxious to follow up on their work.

My stay has been both enjoyable and profitable. I had hoped for more opportunity to work with the Ministry of Agriculture on specific problems, but perhaps visits to the various institutes will reveal problems on which I may be of service.

Report
by

John C. Steele, Specialist
Irrigation and Drainage

This report covers the third six (6) months at Ankara University dating from March 22, 1957, to September 22, 1957.

Working Conditions at Ankara University College of Agriculture

Office: As stated in my previous two reports, the office provided for my use is a pleasant place to work and has proved to be entirely adequate except for another table. This is needed for the proper storage and display of irrigation equipment models. I requested such a table eight (8) months ago, but to date, this has not been made available.

The janitor service has been excellent. Hasan, our kapici (janitor), keeps the office neat and clean. He is not only prompt in carrying out his duties but extremely pleasant as well.

SCOPE OF ACTIVITIES

Research Work

The research activity of the Kulturteknik (Agricultural Engineering) Department is very modest. It is limited to that being done by three young assistants for their Doctorates. Mustafa Ayyildiz, working in irrigation, is studying the "Water Requirement of Corn." Sehattin Akyol, working in the field of drainage, is working on the "Reclamation of Saline Soils." Ali Balaban, in the farm structures field, is investigating the present farm building conditions in Ankara Province. (See my March 22, 1957, report for discussion of these projects.)

The past six months I have counceled with these three young men as particular problems have arisen. Mustafa was shown the proper method of obtaining the necessary soil samples, both for water content measurements and the physical and chemical analysis. I also advised him on equipment and methods of water measurement as well as irrigation intervals. Sehattin was helped to determine the number, location, and depth of observation wells to be installed as part of his project. I have been unable to give Mr. Akyol as much assistance as I would like this summer as he is carrying on his work at Kayseri. The only help I have been able to give Mr. Balaban has been to check his progress and to accompany him to several villages where I was able to observe his method of obtaining the desired information. I found Ali to be extremely thorough in his work as well as very thoughtful in explaining to each cooperator the purpose of and the benefits they might expect from the study.

Teaching

My teaching activities the past six months consisted of continuing the

classes I had the preceding months. (See my second six (6) months report.) . In addition, I was requested on March 7th to set up another class. On learning that this was to be for the same students attending the present class, I refused. However I agreed to give this class another hour per week. I acted in this manner because I felt that the additional hour might make it possible to cover the material I wanted to get across. Without this extra time it would have been impossible. This solution was agreed to by the Department; however, it was not until April 10th that I was allowed to meet the class this extra hour.

Assistant Training

While classes were in session, the training activities with the assistants continued much in the manner of the preceding months. (See my September 22, 1956, report.) Since the end of classes, there has been little opportunity to carry on any actual training activity with these young men. Vacations, field trips, and research work has kept either myself or the assistants, or all, out of the office most of the past three (3) months.

Cooperation With ICA Personnel

During the winter months, I cooperated with Mr. Carl Forsberg and Mr. James Metzger in preparing an extension-type bulletin, "Construction and Use of Small Equipment for Farm Irrigation." (See March 22nd report.) This publication came from the press in July and has been made available to Ministry of Agriculture technicians and county agents. To date, it has not been translated into the Turkish language. This should be done as quickly as possible.

Mr. Forsberg, having been in charge of the Izmir Irrigation Practices Leadership Seminar last year, asked me to make program suggestions for a similar meeting to be held in Teheran sometime next spring. At his request, I prepared a brief outline of program suggestions that I felt might be helpful in setting up the above meeting. I trust and hope that these prove helpful to him in discharging his responsibilities.

Field Trips

Seven field trips were made the past six (6) months. (See table below.) Four (4) of these were made with Ali Balaban to villages where he was carrying on his field work for his Doctorate. These trips afforded an excellent opportunity to observe Turkish village life as well as the type and condition of the village buildings.

Three (3) other trips were made to study irrigation conditions in the southeastern, eastern, and far western areas of Turkey. On the southern trip I was able to help Ahmet Tasur, Acting Director of the Ceylanpinar State Farm, with some of his irrigation problems. After studying his proposed plan for developing additional irrigation and after making a rather hurried reconnaissance of the area, I made a few suggestions as to procedure. Upon returning to Ankara, these were put into a report which went to Ahmet Bey and the Director of State Farms. On July 31, 1957, a letter of appreciation was received from the Director in which he stated that they would start construction in 1958.

At the Igdir State Farm, where we spent one night while on the eastern trip, I was asked to look over a proposed irrigation plan. This plan is based on the use of Aras River water and that of a smaller stream flowing through the Farm. The plan had been worked out in considerable detail, and I understood that construction would be initiated as quickly as funds could be made available by the State Farm Office in Ankara. Upon learning that some of the waters which they propose to utilize are highly mineralized, I advised that a careful analysis be made before proceeding further with the project.

The Director of Turkgegi State Farm near Kirklareli, which we visited on our western trip, showed us the artesian wells and the distribution system used for irrigation. During this inspection trip over the Farm, I was able to make a few suggestions - such as using take-out boxes for borders - which would help make their irrigation more efficient.

DATE	VISITED	WITH
April 11	Ikizce	Ali Balaban
April 18	Basbereket	Ali Balaban
May 29	Cigirler	Ali Balaban
June 11	Celebi	Ali Balaban, Dr. Blunn
	Kirikkale	" " " "
	Keskikale	" " " "
	Hasan Dele	" " " "
June 15	Adana	Dr. Alagoz, Dr. Blunn
16	Antakya	" " " "
	Hatay State Farm (Hatay)	" " " "
17	Gaziantep	" " " "
18	Ceylanpinar	" " " "
19	Malatya	" " " "
20	Yozgat	" " " "
July 22	Ulas State Farm (Sivas)	Dr. Yarkin, Dr. Blunn
23	Malatya	" " " " ,Dr. Alagoz
24	Diyarbakir	" " " "
25	Alsparlan St. Farm (Mus)	" " " "
26	Altindere Hara (Ercis)	" " " "
27	Igdir State Farm (Igdir)	Dr. Yarkin, Dr. Blunn
28	Ardahan	" " " "
29	Hopa	" " " "
30	Giresu	" " " "
31	Samsun	" " " "
August 1	Gokhoyuk (Amasya)	" " " "
19	Bursa	Dr. Alagoz, Dr. Blunn
20	Istanbul	" " " "
21	Edirne	" " " "
22	Turkgeldi State Farm (Luleburgaz)	" " " "
23	Izmet	" " " "

General Observations and Suggestions

The past six months have served to further strengthen my feeling that irrigation is extremely vital to the welfare of the Turkish people and nation. The need for well-trained irrigation technicians is exceedingly critical. In addition, well-trained people are needed to work directly with farm people in order to educate them in better and easier methods. Thus, as I have pointed out in previous reports, it is extremely important that the irrigation and drainage course at Ankara University be strengthened and expanded immediately. Every agricultural student should be required to take one class in irrigation and those planning on working in this field should be given additional courses.

My suggestions for strengthening the irrigation and drainage work are as follows:

1. Replace present course by:
 - (a) A course for general Agricultural students.
 - (b) Courses for students majoring in irrigation and/or drainage.
2. Reduce number of students per class - not to exceed thirty (30) per class.
3. Increase hours of class work - a minimum of three (3) hours per week.
4. Provide laboratories so that students can learn by doing - recommend a minimum of four (4) hours of laboratory work per week.
5. Provide textbooks and other printed materials.

My suggestions for strengthening the over-all teaching program are as follows:

1. Set up definite curriculums well in advance - at least one or two years.
2. Establish minimum and maximum number of class hours a student can carry each semester.
3. Set class schedules well in advance - at least a semester in advance.
4. Set class schedules and allocate classrooms at the college level, not the separate department level.
5. Allow students a limited choice in selecting courses.
6. Broaden the method of grading.
 - (a) Recommend better checks on class attendance.
 - (b) Recommend the use of one final exam for each course and that it be given at the conclusion of each semester's work.

Report
by

M. L. Baker, Dean
and
Chief of Staff in Turkey

Considerable, although erratic, progress was made under the Nebraska program in Turkey during the 26½ months terminating June 30, 1957. It is difficult to delineate with assurance the reasons for the failure to make more rapid and consistent progress. Everyone concerned ostensibly was interested in the rapid development of the program.

Difficulties inherent in the organization and operation of Turkish Universities were largely responsible for shortcomings in the Ankara University program. Frequently the Faculty concerned overestimated what it was prepared to do to use American personnel most effectively.

However, much actually was accomplished as outlined to some extent in individual reports. From my point of view these accomplishments may be summarized briefly.

1. Developing and teaching new courses to strengthen newly established "majors."
2. Working with Turkish personnel to fit them better to take over responsibilities for teaching as the Nebraska staff completes its service. This could have been more effective had we been given more effective support from the Faculties. On the other hand it is probable that in most cases they did the best they could.
3. Assisting with short courses frequently for Ministry of Agriculture personnel.
4. Assisting with research planning and work and in a very few cases developing specific programs of it. It should be continued, probably on a somewhat reduced scale both as concerns American personnel in Turkey and Turkish personnel sent to the United States. Although I would regret seeing hard and fast miles adopted. I believe that emphasis should be put on sending the younger staff members to the United States.

Progress on the development of Ataturk University was impeded probably by economic and political problems in Turkey, by the inherent administrative weaknesses in the Turkish government and by the fact that we were never able to induce the Ministry of Education to set up an effective working committee. During the period covered by this report we had to deal with three different Ministers of Education.

Probably one of our primary handicaps was due to the fact that generally the Turks had only a superficial idea - or none at all - of what a Land-Grant-Type University should be and instinctively objected to anything which looked like one.

There seems to be no good reason for outlining all of the difficulties encountered. Despite them considerable progress was made.

1. A University site, more than ample in size and apparently suitable in other respects was obtained.
2. Plans for the organization of the University with tentative curricula, estimated building needs by years, and faculty requirements by years, were developed.
3. Basic data for needed building were developed. On the basis of these an architectural competition was staged and architects for the development of actual plans and specifications were selected.
4. Plans for the first year's buildings were well advanced and bids for construction were scheduled for July 7.
5. Some steps were taken toward developing a personnel selection and training program and a few participants sent to the United States. This program was retarded greatly by our inability to obtain the passage of basic legislation or a charter for the University.
6. The passage of the Ataturk University law was finally achieved and made effective June 6, 1957. The importance of this law had been pointed out almost two years before.

Much also has been accomplished in broadening the understanding of what a "new type" or "Lang-Grant-Type University" should be.

We might as well reconcile ourselves to the fact that we are not going to accomplish what we wish as rapidly as we wish. This does not detract from the importance of the job.

Future commitments should be based as far as possible on clear-cut commitments from the Turkish government. Even so, such commitments are always subject to interpretation and should not be taken too seriously.

Assuming that Ataturk University is to open in the fall of 1958, we should be in a position to send some American personnel to Erzurum at that time or somewhat in advance of it. Such an undertaking will involve many problems. These should have as much advance consideration as possible.

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Final Report
by
Dr. T. H. Goodding
Agronomist

SUGGESTIONS FOR IMPROVING THE ANKARA UNIVERSITY
COLLEGE OF AGRICULTURE-UNIVERSITY OF NEBRASKA PROGRAM

1. The University of Nebraska faculty members on the Ankara University College of Agriculture campus as a group should meet with the Dean of the Ankara University College of Agriculture more often - at least once a month during the school year. This group should also meet with the Dean of the University of Nebraska Faculty in Turkey once a month. Two or three times during the year both Deans should be present at a monthly meeting to review teaching programs, research programs, research projects and to give advice on problems that are constantly coming up in connection with these phases of work.

Specialists in the Ankara-Nebraska Group should meet with the I.C.A. Specialists interested in the same line of work.

The Dean of the Nebraska Group and the I.C.A. Chief Food, Agriculture and Natural Resources should meet with the I.C.A. Agricultural Specialists and the Ankara-Nebraska Specialists in joint session at least twice a year so the members of the two groups can become better acquainted and to discuss agricultural projects of common interest to both groups.

2. Considerable progress has been made in the cooperative program between the University of Nebraska and the University of Ankara College of Agriculture but there are areas in both teaching and research where additional help is needed. Laboratory instruction in a number of courses are conducted largely on a demonstrational basis due to a lack of certain chemicals and different types of equipment which are not available in Turkey. As a result research work in some areas is at a standstill. The purchase of equipment and chemicals which cannot be obtained in Turkey is moving too slowly to keep pace with the other phases of the program.

3. Laboratory demonstrations are essential but a demonstration in itself does not carry far enough as a teaching procedure in the training of scientists. The student needs to learn the techniques involved in handling the equipment properly and efficiently. Scientific equipment is expensive and maintenance may be costly. In order to take care of breakage and wear and tear, extra parts should be included at the time the original order is made up. Nevertheless, if instruction and research are to be conducted on a high level of performance and accomplishment this phase of the program needs to be speeded up. If the budget already set up for this purpose is too small to take care of these needs it should be increased accordingly.

4. The information in many of the courses taught on the Agricultural College campus in Ankara is presented largely through the class lecture. There is a distinct need for Turkish textbooks. Until such time as it is possible for University of Ankara Agricultural College Professors to write

textbooks in Turkish, it seems that standard textbooks written in other languages should be selected and translated into Turkish.

5. There should be closer coordination and cooperation in research and extension programs between the members of the Turkish Agricultural Ministry and the members of the Ankara University College of Agriculture Staff, also between the Agricultural workers in I.C.A. and the American Specialists on the Ankara University College of Agriculture program. Each specialist on the University of Ankara Agricultural College campus should have a Turkish counterpart. A number of the Agricultural workers in I.C.A. have stated that a good Turkish counterpart is very important, probably the most important factor in carrying out a successful program in Turkey. Some of our Specialists who have been in Turkey many months do not yet have counterparts. It is essential that something be done about this situation.

A WORD OF APPRECIATION

The two-year tour of duty in connection with the Ankara-Nebraska Project has been pleasant and interesting. The cooperation and encouragement received from the two Deans, Marvel L. Baker of the Nebraska University Group and Sabahattin Ozbek of the University of Ankara College of Agriculture, has been stimulating and greatly appreciated. These two men, in my estimation, have made an ideal team. They have initiated a program in Agricultural Education and Research that will mean a great deal to the rural life and agricultural industry of Turkey if faithfully pursued by those who follow in their train.

The friendly advice and cooperation received from Professor Osman Tosun, Head of the Division of Crop Production and Crop Improvement, has been most helpful and considerate. Dr. Huseyin Gokcora, a former graduate student at the University of Nebraska and my interpreter and counterpart in teaching the course in Plant Ecology, has given excellent support and cooperation in this, my main project.

The Turkish Staff and Faculty have been friendly and have taken an interest in our welfare.

The interest and support received from the I.C.A. Group has been very encouraging and stimulating. In fact, the cooperation and coordination between members of our group and those of I.C.A. in our work programs has been outstanding.

The present American team of ten members and the two secretaries connected with the Ankara University College of Agriculture program constitute an organization of which both the Ankara University and the University of Nebraska can be proud. I shall look back on the two years spent on the Ankara-Nebraska Project with considerable satisfaction and enjoyment.

REPORT OF THE UNIVERSITY OF NEBRASKA
TURKISH PROGRAM

by

Stanley A. Smith

This report covers the period of my official activities from April, 1955 to April, 1957 as a member of the University of Nebraska team working under the direction of the International Cooperation Administration in advising the Turkish Ministry of Education. The principal field of activity of this team was to furnish advice for the complete planning of a Land Grant type of university to be located at Erzurum in eastern Turkey. My primary responsibility was to act as architectural advisor to the Ataturk University Development Committee which was in turn to advise the Turkish Ministry of Education in the planning of this new university.

We arrived in Ankara on the 8th of May, 1955 and I began my work at once. After meeting the Dean of our team, Dr. Baker, and the Turkish members of the committee, the first important activity was to visit the proposed site of the University at Erzurum. The next step of our group was to make studies of the Turkish educational system as well as the needs of such a university training for the people of Turkey, especially for eastern Turkey and to recommend an organization scheme for the university administration.

Following these studies we prepared a recommended curriculum for the various fields of teaching. Based on these curricula we recommended the desirable size of the teaching and administrative staff. Inasmuch as my architectural advice could not be given until these curricula and staff studies had been made, I assisted in the preparation of this material by being responsible for the fields of Architecture and Civil Engineering and assisting with Agricultural Engineering.

At this point in our program of work it was decided that we should hold a competition for the selection of the architectural firm to plan the campus and the university buildings. Consequently two Turkish architectural teachers were assigned to work with me as a Technical Bureau to prepare the material for this architectural competition. These teachers were Orhan Bolak from the Istanbul Technical University and Ayhan Aytore from the Istanbul School of Fine Arts.

This Technical Bureau collected all available data about the topography of the site, soil conditions, weather, earthquake probability, source of water, coal, electricity and other utilities for the use of those who might enter the competition. Also with the various curricula prepared, the probable enrollment estimated and the size of the staff determined, our Technical Bureau could compute the number and size of class rooms, laboratories and offices needed and these determined the size and number of university buildings as well as student and staff housing. We also prepared a suggested schedule of construction priority for the development of the buildings and the campus plan.

This report of the building needs and the physical conditions of the site

was presented to the Development Committee and it in turn to the Minister of Education. He approved the report and dismissed the Technical Bureau. The report was then turned over to the Ministry of Public Works for the final preparation of the requirements for the competition to select the university architect. Our team also submitted to the Ministry of Public Works, at their request, a list of suggested American members for the jury which would select the best designs of the competition. From our recommended list of names the Ministry selected Architects Richard Neutra of Los Angeles, California and Glenn Stanton of Portland, Oregon. I was also asked to serve as a jury member. The jury was composed of ten Turkish architects or engineers in addition to the three Americans named. An advisory jury was also appointed with Dean Marvel Baker and Mrs. Richard Neutra as the American members.

Allowing time for the competitors to prepare their drawings the jury met in October, 1956 and selected the first, second and third best drawings as well as some honorable mentions from a group of twenty two entries. The winning design was that of Enver Tokay and Hayati Tabanlı, Architects of Istanbul.

After considerable delay, probably due to the lack of money and the absence of the law which legally established the university, the Ministry of Public Works finally contracted with the winning architects for the architectural services for the first group of university buildings. These first buildings to be built were to be a Chemistry building, a Social Science building, a student dormitory and some staff housing. It had been recommended that a heating plant be one of the first group of buildings to be built but I do not believe that this was contracted for. Following the signing of the contract for the architectural services I had only one official conference with the university architects.

Because of delays in our regular program of work, I had time to assist in other activities. For Ataturk University we started an analysis of the probable cost of the necessary equipment for the classrooms and laboratories. I worked with I.C.A. personnel in the preparation of budgets for assistance in building programs and I assisted in the preparation of a model extension bulletin on low cost sanitary toilets. I also spent some time at Ege University near Izmir giving advice about their campus plan. I spent considerable time working with I.C.A. and the Ministry of Education in the preparation of a list of requirements and the selection of an architect for a Home Economics building for Ankara University. On the whole I feel that our team and our committee accomplished a considerable amount of work; work which I believe was appreciated by the Turkish people and their government officials. It is certain that we could have accomplished very much more except for the frequent and lengthy delays in getting decisions on our recommendations. The Turkish members of the Ataturk Development Committee were all full time University professors and in most cases were employed in other additional work. This left them little time to spend with our Nebraska team.

My recommendations to be used in considering a possible extension of the contract would be to insist that the Turkish Government appoint at least one and preferably more representatives who could work full time with the American group and who would have some reasonable authority to make decisions or get them made with a minimum of delay. I believe also that there should be closer contact between the Ministry of Public Works, the architects for the University

and the Development Committee. I do not believe that this has been done in the past.

There is need for a good Land Grant type of university in the eastern part of Turkey. I believe that the help given so far has been of considerable value, however, I believe it is to the advantage of both Turkey and the United States that this aid be continued to be given at least until the university is in full operation.

REPORT

by

Albin T. Anderson
Arts and Science Advisor

I report here briefly on my general activities and responsibilities for the two-year period that I was in Turkey, June 1955 to May 1957.

1. I served on the Ataturk University Committee and participated in the planning discussions on all phases of the program.
2. My special responsibility was with planning and personnel problems in connection with the proposed creation of a College (Faculty) of Letters and Science. Examples:
 - (a) Drafted a teaching and research program for some eleven departments in this Faculty.
 - (b) Worked with Professor Stanley Smith in the preparation of space requirements for Letters and Science at Ataturk University.
 - (c) Held many special sessions with Professors Koklu, Izbirak and Gursoy to evaluate some 250 applications in Letters and Science for training for Ataturk University or for teaching at Ataturk University.
 - (d) Consulted frequently with appropriate personnel (professors) at Istanbul University, Istanbul Technical University, and Ankara University in regard to persons who had applied or who might be induced to apply for a position at Ataturk University.

The above represents my general activities. On the basis of this experience I wish to submit certain observations about the Ataturk University program.

1. It is my conviction that the kind of University we have visualized will be of tremendous benefit to eastern Turkey.
2. Despite the fact that the present Universities have gone on record officially as opposing certain proposed features of the new University this opposition can be easily interpreted:

- (a) It springs from ignorance of the meaning of certain terms and words.
- (b) There is a reluctance to concede that anything new can be better; this would be self-indicting, a confession of failure.
- (c) What the Universities have said officially and publicly is exactly opposite to what individuals have told me privately and unofficially.
- (d) There is a sort of spiritual and intellectual malaise in present Turkish universities, and there is a tendency frequently for present professors to interpret the program for Ataturk University as another government effort to subvert university autonomy. They have difficulty in understanding the simple fact that their American colleagues are even more sensitive about the role of the university, the issue of academic freedom, etc., etc., than they are themselves. They jealously guard the principle of self-rule; we are concerned primarily with freedom to teach and perform research according to the best accepted canons of scientific objectivity.

3. I am certain that only a handful of the some 400 applicants presently registered are the kind of people we would like to see at Erzurum. The vast majority are poorly motivated, poorly trained, or poorly endowed with the requisite intelligence. (I would include here most of the people presented on the "approved" list, but not sent.)

4. I believe that we ourselves must try to recruit personnel either within or outside the present universities, and taking the long view, we should select some young people for graduate training who have not yet completed their baccalaureate.

5. From the first day that Ataturk University opens its doors we must have some American personnel on the teaching staff. This will help to give the University direction; it will bolster the morale of younger Turkish colleagues; and it will obviate the plans now active in some Faculties to send their professors there for short terms and concentrated courses and thus treat Ataturk University as a second-rate appendage of Ankara, Istanbul, and Istanbul Technical Universities.

6. Related to the point above is the necessity of insisting that there be adequate Faculty housing at Erzurum. Since we must have our own people there we must be sure that their living facilities will be adequate. The success of this whole project will hinge in large part upon the morale of the Americans.

7. I am convinced that we must now decide what we can do, or are willing to do. This should be discussed with ICA/W. Then there should be a new meeting of minds with Turkey. We need to be particularly concerned about those steps that might spell success or failure from our point of view. Are we, for example, prepared to suggest to Washington that we want to include in our new contract not only certain equipment but also a minimum of construction work? An American contractor (conceivably from Nebraska) might be hired to construct

a heating plant, one of the faculty housing units and perhaps a third building. Most of the building materials and unskilled workers are available in Turkey. It would be the contractor's responsibility to provide a limited number of managerial and skilled personnel, the construction equipment needed (some might be scrounged in Turkey), and the drive. This is only a thought-born perhaps, out of desperation.

8. Finally, I believe that we should broaden our program to the extent of putting it under the heading of "Education" rather than "Technical Assistance." That title would more clearly reflect our present functions and enable us to do some things not presently authorized; e.g., help train a limited number of personnel in "non-technical" fields.

REPORT ON ASSIGNMENT TO TURKEY
FOR THE UNIVERSITY OF NEBRASKA

by

J. Orvis Keller

June 18, 1955 to May 29, 1957

This report will attempt to briefly cover the objectives, and accomplishments of my assignment in Turkey together with some recommendations for future action. The report covers my personal employment from June 1, 1955 to May 31, 1957, both dates inclusive.

Mrs. Keller and I left New York City on July 14, 1955 from the International Airport (Idlewild) on the Pan-American Air Lines and arrived for a stop-over in London on June 15. From here we reached Ankara, Turkey, by plane to Istanbul, and train from Istanbul, early Saturday morning, June 18, 1955. We departed Ankara late Wednesday night, May 29, 1957, from the Esenboga Airport, Ankara.

Our primary objective was to establish in eastern Turkey within reasonable time limits a technical university, patterned as closely as conditions warranted after the typical American Land Grant College. Because of our meager knowledge of Turkish customs, attitudes, educational philosophy, and history, our task was more complex than I had realized. It would have been a much easier task had all of us known more of the Turkish background.

Mrs. Keller and I were the last to arrive of the group assigned to our particular objective, namely the establishment of Ataturk University. I was to be the engineering educator and advisor, and by mutual agreement with Dean Green and Mr. Stanley A. Smith, our Architect, my field concerned particularly mechanical and electrical engineering.

At first it was thought possible to open Ataturk University in the fall of 1957 at Erzurum, the site chosen for its location by Turkish officials before I arrived. Dean Green had told me in Lincoln that he hoped we could get started by the fall of 1959, and therefore I was agreeably surprised at this earlier date. As we met weekly with our Turkish Advisory Committee appointed by the Turkish Ministry of Education, it slowly became apparent that the earlier

date was unrealistic, and consequently we changed the date of the opening goal to the fall of 1958.

Secondary Objectives (Engineering)

We, of course, had to set up more detailed goals in line with our primary objective and, therefore, I list the secondary objectives insofar as the program concerned mechanical and electrical engineering curricula:

1. Determine the number of students for our course offerings in the first or freshman year.
2. Determine the number of students in these two curricula, after the program was to be fully operating.
3. Determine whether or not a graduate and research program was to be offered in Engineering.
4. Prepare curricula in both the mechanical and electrical engineering fields.
5. Determine the number of faculty members needed, their rank, grades, and annual cost for their services.
6. Prepare a description of all technical courses to be offered in these two curricula.
7. Have these descriptions and other necessary items translated into the Turkish language for use of the Advisory Committee and other Turkish officials.
8. Start the selection of Turkish faculty members in these curricula and determine the training programs deemed necessary for these persons, insofar as the training was to be conducted in Turkey, in the United States or in other countries.
9. Layout and help Prof. Smith with the preliminary design of laboratories, classroom, office space, and auxiliary service space for buildings to house the work in mechanical and electrical engineering instruction.
10. Determine the laboratory and other equipment needs for these buildings together with approximate costs.
11. Secure concurrence in these foregoing objectives from our Turkish Advisory Committee and approval from the Turkish Ministry of Education.

Accomplishments

The others in our group had set up similar secondary objectives, and we all worked together quite closely in trying to accomplish our aims. Of course, we were delayed considerably in this by reason of the fact that we did not at

first understand Turkish background and viewpoints as well as we did later. The Turks did not fully understand what was meant by a "Land Grant College" and when they did realize to a certain extent what such a university implied, it was so revolutionary to their ideas that many of them were pretty much opposed to many of these implications. This meant that we had to compromise in many ways. For instance most of our Advisory Committee members were at first greatly opposed to a Board of Regents composed of laymen. In Turkey the top faculty members act as a control board, and so we had to compromise on an "advisory" board. Again the basic university law in Turkey was such that many of us felt it would be impossible to establish a land grant type of university under its rules, regulations, and salary provisions; and so it was felt that we would first have to secure the passage of a special law that would permit us to set up a university such as we envisaged or give up the whole project. The passage of this special law was promised month after month from November 1955, but it was not until shortly after I left Turkey in 1957 that it was finally passed by the Grand National Assembly. (Turkish Congress or Parliament).

I had been told that upon my arrival in Turkey a Turkish counterpart would be assigned to me, to work closely with me on a day to day basis. This was never done in my opinion, although after many months, Professor Turkman, Director General of our Advisory Committee, and a civil or structural engineering professor, informed me that he was my counterpart. Much earlier we were told that he was the counterpart for Professor Smith.

Space prevents too detailed a report on our various accomplishments, and therefore I shall confine the rest of this to how well our secondary objectives were carried out.

1. The freshmen for all engineering curricula were to be fifty for each curriculum to start.
2. After the end of four years of operation each curriculum was expected to have 200 students. This assumed that there would be no drop-outs through failure or other cause. At all events we were to make our plans for this many students.
3. A graduate program in engineering was never fully agreed upon.
4. We worked out a five-year program, however, in both mechanical and electrical engineering, as well as a four-year program. At the end of two years there were to be three options in mechanical engineering, namely, (1) machine design, (2) heat power, and (3) production. Likewise after two years there were to be two options in the Electrical engineering curriculum, namely, (1) electrical machinery, power and transmission, and (2) electronics. All of the aforementioned objective material except that relating to the engineering graduate program were placed in a preliminary report together with similar material relating to all other curricula, and this report was approved by the Turkish Advisory Committee. Dr. Baker sent a copy of this report to the University of Nebraska.
5. A table was prepared showing the faculty need as to rank, grade, and approximate cost, as well as the time trainees should be sent away

for training. This table also appeared in the approved preliminary report.

6. Descriptions of curricula and courses prepared for mechanical and electrical instruction were also contained in the approved report.
7. Of course, Turkish translations were prepared before the report was submitted to the Turkish Advisory Committee.
8. The selection of faculty was only partially begun, as it was announced by Dr. Ozel, when he became Minister of Education in the late fall of 1955, that there would be no engineering curricula at Erzurum. Later he changed this decision, for Dr. Baker was about ready to recommend that the whole program be abandoned, and it was decided that we should plan for programs in Architecture and Civil Engineering along with Agriculture and Letters and Science. The curricula in mechanical and electrical engineering was to be postponed for two years.
9. Prior to this time I had completed the layout and preliminary design of laboratories, classrooms, and other space requirements for my two curricula in the form of pencil sketches. In January 1956, it was decided that a representative from the Ministry of Public Works would make tracings of the pencil sketches in ink. Line drawings were partially completed, but the Turkish translations of the equipment were not filled in, so that blueprints could not be distributed to interested persons such as Prof. Turkman, Dean Green and others. These partially completed tracings are on file at our Ankara office.
10. Original equipment lists were completed and some time later separate lists of the most essential equipment items were prepared together with approximate dollar costs.
11. The concurrence and approval of our objectives were only partially accomplished. Our greatest accomplishment, in my opinion, was the passage of our special university law by the Grand National Assembly shortly after I left Turkey. The bill had been introduced and had received the necessary approvals before I got away.

Recommendations

I would recommend that the engineering replacement be held up for some time to come. It would appear that the need for the Architect to replace Prof. Smith is more timely and he will have some fundamental engineering background, enough to make some engineering decisions at first.

The head of the group in Turkey should determine how soon an engineering program will be started at Erzurum and an engineering advisor should be sent to Turkey at least six months before such a program is to begin, and preferably one year before this start.

Finally I would recommend that extra precautions be taken to make sure that this advisor be assigned a competent Turkish counterpart who will spend full time with our American engineering advisor.

Conclusion

Despite all the frustrations and headaches incident to this program, I enjoyed it all immensely and consider myself very fortunate indeed to have had a small part in it. I should be very glad to assist in briefing my replacement, if this is considered desirable. I know that my own efforts would be more effective now, after my experience in Turkey, for I would have a valuable background upon which to make more efficient progress.

ATATURK UNIVERSITY LAW

Article 1. Ataturk University is established in Erzurum. It will be administered by the Ministry of Education under the provisions of University Law #4936, except as modified.

Article 2. A Board of Advisors for Ataturk University composed of six persons is appointed by the Minister of Education. Each member serves for six years, with two members being appointed every two years. To organize this change, initially two members will be appointed for two-year terms, two for four-year terms, and two for six-year terms. At the end of these individual periods, the Minister of Education appoints a new member to the Board, from two candidates nominated by the Senate for each vacancy. Members can be reappointed. In case of a member's dropping out--by any reason--from the Board, the vacancy will be replaced in accordance with the above procedure.

Article 3. Persons may be appointed to the Board if they are broadly representative of the professional, business, and cultural interests of Eastern Turkey, and if they do not otherwise hold a position in the University or other positions where salaries are fixed under a legislation.

Per diem will be paid to the members of the Board, for their official trips, and a per diem of 100 lira is paid to each member while the Board is in session. The Board of Advisors meets at least quarterly under the Rektor. Special meetings may be authorized by the Rektor as needed.

Article 4. The Board represents the interest in, and the concern of, the public in Ataturk University.

- a) The Board advises on a long-term University policy in teaching, research, and extension.
- b) It reports its findings and recommendations to the Minister of Education and to the Rektor. The Rektor, in turn, reports these findings and recommendations to the Senate.
- c) It assists to secure private and public funds for the purpose of helping the development of the University, and its functioning in a satisfactory way.

Article 5. The Rektor is selected by the Council of Ministers among ordinarius professors, upon recommendations made by the Ministry of Education for a period of five years. He can be reappointed.

Article 6. Dean's appointments are approved by the Minister of Education upon recommendations made by the Rektor among ordinarius professors or professors for four years. They can be reappointed. Every faculty will have the necessary number of assistant deans. They are assigned by the Rektor upon recommendations made by the deans among ordinarius professors and professors.

Article 7. The Departments, which form a unit from the standpoint of teaching and research and which consist of pertinent chairs and courses, are administered

by Department Chairmen. Chairmen of Departments are nominated by the concerned Faculty Deans and appointed by the Rektor. Their period of service is three years. They may be reappointed.

Article 8. The responsibility for teaching and research may be assigned to Ordinarius Professors, Professors, and Docents upon the recommendation of the Chairman of the Department involved and the approval of the Dean of the Faculty without reference to academic rank of the individual concerned.

Article 9. Housing and meals subject to charge shall be provided for the teaching staff and their assistants as well as research and administrative personnel by a manual to be prepared jointly by the Ministries of Education and Finance.

Article 10. A revolving fund up to TL 5,000,000 -- is given to the University by annual allocations, which will be placed in the budget. The University may use this fund in the creation of all kinds of installations related to its field of activities, and in other useful work. The income secured by the revolving fund will be spent upon the decisions of the University Administrative Board and reported to the Ministry of Education for construction of buildings and installations which will insure the development of Faculties, Institutes, and Institutions of the University, and increase the efficiency of their activities, and for the purchase of all kinds of instruments, machinery, equipment, raw materials, etc. and for the transportation of same. Any equipment or material aside from those manufactured or produced from the revolving funds cannot be turned over to the University even if the University is charged for it.

The accounts of the revolving funds are made within the fiscal year and the provisions in the law No. 2490 concerning bidding and adjudication, and the general accounts law No. 1050 do not apply to these transactions.

The procedural work in connection with the accounts and the expenditures from the revolving funds will be administered under the principles which will be determined jointly by the Ministries of Education and Finance.

The accounts concerning the revolving funds will be submitted to the court of accounts within four months of the end of each fiscal year and one copy of it sent to the Ministry of Education.

An additional salary of 30-300 Turkish Lira may be paid out of the income secured by the revolving funds to those faculty members who are employed in the work connected with the revolving funds.

Article 11. The kadros for Ataturk University teaching staff, their assistants and administrative personnel shown on table No. 1 attached to this law are inserted in table No. 1 of law No. 4936 and table No. 2 dealing with the supplementary payments for additional work are inserted in table No. 2 of the same law.

Transitory Article 1. The initial teaching and research personnel for Ataturk University are nominated jointly by the Chairmen of the Departments involved (if there are any), the Deans, and the Rektor, and are appointed by the Minister of Education. After the Councils of Professors are formed, such appoint-

ments are made, during the first 10-year period, by the Minister of Education, upon the proposal of the Council of Professors, and approval of the Rektor.

In the selection of teaching and research personnel, the pertinent provisions of Law #4936 will be considered. However, during the first 10-year period, the length of time for Docents and Professors may be shortened by not more than two years, by considering the competence and the work of the nominee.

Transitory Article 2. The first ten years, the assistants are appointed by the Rektor upon nomination by the Deans. However, changes may be made in the periods for Assistants and Doctorate as laid down by the Law #4936.

Transitory Article 3. During the first 10 years, the Secretary-General is nominated by the Rektor, and appointed by the Minister of Education; Directors of Personnel, Secretarial Office, and Library and the Faculty Secretaries, are nominated by the Secretary-General (if these are to serve for the whole University), and nominated by the Dean (if they are to serve exclusively for the Faculty), approved by the Rektor, and appointed by the Minister of Education. All other employees (if they are to serve for the whole University) are nominated by the Secretary-General, and (if they are to serve within the Faculty) are nominated by the Deans, and appointed by the Rektor. The chief accountant and junior accountants are appointed by the Ministry of Finance.

Transitory Article 4. During the first 10 years the Ministry of Education will determine the transportation expenses, actual rates of travel expenses and per diems not exceeding double the amount entitled to in Turkey for the travel of Ataturk University teaching staff to foreign countries under the provisions of the laws numbers 4489 and 4936.

Transitory Article 5. The kadros shown on table 3 attached to this law are inserted in the L marked section of the 1957 budget concerning the Ministry of Education.

Transitory Article 6. The kadros for the employees shown on table 4 attached to this law are inserted in the D marked section of 1957 budget concerning the Ministry of Education.

Article 12. This law will take effect as from its promulgation.

Article 13. Provisions herein will be executed by the Council of Ministers.